re Minima Vournal,

AND COMMERCIAL GA

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2229.-Vol. XLVIII.

LONDON, SATURDAY, MAY 11, 1878.

SUPPLEMENT. | SPRICE SIXPENCE.

R. JAMES H. CROFTS, STOCK AND SHARE BROKER. AND MINING SHARE DEALER. No. 1, FINCH LANE, CORNHILL, LONDON, E.C. ESTABLISHED 1842.

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BUSINESS negociated in Stocks and Shares not having a general ma

BUSINESS in COLLIERY and IRON Shares, and in the principal Wagon and INUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND. BUSINESS in all the principal Cotton Spinning Shares.

Business in all the principal COTTON SPINNING Shares.

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A Daily Price List, issued at 5 p.m., giving latest Quotations up to close of arket. Also, on the lat of every month a List of all Securities currently dealt upon the Mining and Stock Exchanges, with latest prices, current dividends, te of interest yleided at market price, &c., and every Friday a general List conining closing prices of the week.

Minne Inspected.

Eakkers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following, or part:

| 20 Aberdaunant, 7s. 9d. | 20 Hultafail, 2436. | 25 Rookhope, 19s. 6d. 10 Richmond, 2934. | 26 Langlif and Swansea. | 150 Javail, 6s. | 30 Chapel House, 234. | 30 Chondales, 12s. | 30 Chapel House, 234. | 30 Lian Wast, 262 2s. 6d. | 30 Lian Gan, offer wid. | 30 Van Consols, 10s. | 30 Exchequer, 2s. | 30 Sect. Kapan, 11s 3d. | 30 Wan Consols, 10s. | 30 Gienroy, 17s. | 30 Penstruthal, 4s. 3d. | 30 Wan Consols, 23s. | 30 Gienroy, 17s. | 30 Penstruthal, 4s. 3d. | 30 Wan Consols, 23s. | 30 Gienroy, 17s. | 30 Penstruthal, 4s. 3d. | 30 Wan Consols, 23s. | 30 Wan Consols, 10s. | 30 25 Rookhope, 19s. 6d.
10 Richmond, £9¾.
30 Roman Grav., £7 18 9
30 St. Harmon, 30s.
25 Tankerville, £4 3s 9d.
5 Van, £20¼.
30 Van Consols, 10s.
30 W. Tankerville, 11s 9d.
40 ditto Preference, 24s.
20 W. Ohiverton, £114.
25 W. Wye Valley, £1 16s 3d.
20 Wh. Peevor, £6%.

THE D'ERESBY MOUNTAIN DISTRICT.-DERESBY MOUNTAIN.
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SHARES on SALE at the LOWEST NET PRICES.
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SPECIAL BUSINESS in the above, and Fortnighty Accounts opened on re JAMES H. OROFTS, 1, FINCH LANE, LONDON.

RAILWAYS — HOME AND FOREIGN.

SPECIAL BUSINESS in the above, and Fortnightly Accounts opened usual cover.

JAMES H CROPTS, 1, FINOH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.
MISCELLANEOUS.
Alhambra Palace.
Lawes.
Lawes.
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Described Warehouse.
Described TRAMWAYS.
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Bristol.
Edinburgh,
Glasgow.
London. Langdale. Newcastle. TELEGRAPHS. North Metropolitan. Tramways Union. AQUARIUM.

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gitton.

yal (Westminster).

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Business Transacted in all Miscellangus Bhabes (of whatever description) having London or Country Market Values. JAMES H. CROFTS, 1, FINOH LANE, LONDON.
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5 Assheton, 21s. 6d. 50 East Caradon, 11s. 6d. 30 New Quebr 501AL BUSINESS in the u
50 East Caradon, 11s. 6d.
20 Eberhardt, £7\%.
30 Frontino, 50s.
25 Flagstaff, 12s. 6d.
10 Corsedd & Merilyn.
50 Glenroy, 16s. 3d.
5 Great Laxey, £10\%.
30 Huitafall.
50 Javali, 6s. 9d.
70 Kapangas, 9s. 6d.
20 Leadhills.
30 Last Chance, 24s.
50 Lianrwst.
60 Marke Valley, 7s.
15 Minera. 1ermentioneu :—
30 New Quebrada, 36s.
50 Parys Mount., 9s. 6d.
70 Penstruthal, 5s. 3d.
40 Port Phillip, 11s. 6d.
15 Richmond, £9 11s. 3d. Aberdaunant, 8s. 6d. Blue Tent, £3. Birdseye Creek, 21s. Cambrian. 16 Richmond, £9 11s. 3d.
50 Rookhope, 18s. 9d.
10 Roman Grav., £93/s.
15 South Frances.
20 Tankerville, £4/s.
100 Tyn-y-Fron.
10 Van, £20/s.
15 Wh. Greaville, £3/s.
20 West Pateley Bridge,
£2 1s. 3d.
50 W. Tankerville, 11s 6d Chontales, 11s. 6d. Cedar Creek, 6s. 3d. 5 Chapel House.
1 Don Pedro, 17s.
2 D'Eresby Consols.
2 Derwent. Devon Cons., £27%. East Van, £4 18s. 9d.

To East van, £4 18s. 9d. 15 Minera. 50 W. Tankerville, 11s 6d.

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50 Pandora, 12s. 6d.

100 Parsys Mountain, 9s.

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20 Posteley Bridge, 22%.

100 Penstruthai, 4s. 6d.

100 East Van, 24%.

100 East Van, 24%.

100 East Van, 24%.

100 East Interville, 24.

100 East Van, 24%.

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DEresby Consols.
DEresby Mountain.
East Van, 244.
Grogwinion, 234.
Grogwinion, 2

Carn Brea, D'Eresby Mountain, Devon Consols, Dolocath, Mellanear, Minera, Seuth Molton Consols, Wheal Crebor, West Godolphin, Wheal Kitty.—Almada, Argentine, Chicago, Hornachos, Javali, Maiabar, South Aurora, Tolima, COLLIERIES.—Alltami, Chapel House, New Sharlston, and Thorp's Gawber. MISCELLANEOUS.—St. Bride's Welsh Slate, Credit Foncier, Hudson's Bay, Jawes Chemical, Native Guano, Tramway, and Aquarlum Shares.

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FERDINAND R. KIRK, STOCKBROKER, SPECIAL BUSINESS in-

SPECIAL BUSINESS in—
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We recommended Don Pedro shares last week for a rise. Since then they have

Flagstaff, 15s. North Laxey, 2s. 9d. Wye Valley, £1 vs. We recommended Don Pedro shares last week for a rise. Since then they have gone up about 50 per cent., and will probably go up another 50 per cent. within a few weeks. The new and powerful pumping machinery has been set to work to drain the mine; great results are anticipated. Advices were received on the 8th instant announcing the discovery of some good samples of gold below deep adit level. Capt. Vivian, the able manager, has expressed his opinion that the Nos. 6 and 8 shoots of gold will form a junction, and he anticipates greater deposits of gold are likely to be found than ever discovered in Maquino.

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are 150 tons of lead.

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Certificated Mining Engineer. (Formerly Student at the Royal Bergakademie, Clausthal).

[The Author reserves the right of reproduction.] SECTION V.

(b.) Side Timbering.—Hitherto we have considered the various kinds of roof timbering. It will be evident that in lodes having but a slight inclination the hanging wall will form the roof, or will be naturally classed as the roof, when the inclination of the lode to the horizontal is less than 45°, and in such a case the arrangement of stempels we have previously described and considered, as the or stempels we have previously described and considered, as the roof would now more properly come to be considered as side timbering, and all the remarks we have previously made respecting the cutting and the fixing of the stempels for the roof timbering will now apply equally to the fixing of the props for the side timbering. Indeed, a drawing of the former, if rotated 90°, would in its new position represent equally well the ordinary method of side

timbering.
In the case of highly inclined lodes of mean width the most usual In the case of highly inclined lodes of mean width the most usual way of supporting either of the sides or walls of the lode is by the means of long planks, strutted or tightened against the wall by the means of two stempels, one at either end. Such a stringing plank may be placed either in a vertical or a horizontal position. Where the sides are likely to break off in small pieces it will be necessary to back the string planks with covering wood, placed pretty close together. This backing is first temporarily held in its place by the means of a single stempel and stringing plank placed in the middle as it is being inserted; the two stringing planks at the ends being afterwards tightened up as the permanent stempels are wedged in

When it is necessary to support both sides of a lode, or level, each may be supported separately and independently in either of the above ways; when, however, the lode is of considerable width, as in the Harz, it may be advisable to use a stronger form of timber-ing. A very common method formerly practised in this district is that known as cross timbering. The essential peculiarity of this is that the lower ends of the stempels are fixed in notches alternately in the hanging and lying walls, and consequently that the upper ends of the stempels are dovetailed or notched into stringing pieces. placed alternately against the lying and the hanging walls. Such timbering, when the lode is drawn in profile, shows the stempels as crossing each other, and hence the name of cross timbering.

(c.) COMBINED ROOF SIDE TIMBERING.—It not unfrequently

occurs that both the roof and the sides require supporting, and though this may often be done by inserting each description of timbering separately, still it is much more usual to employ a com-

timbering separately, still it is much more usual to employ a com-bined timbering, designed to support the roof and one or both sides. The most usual example is the so called door-set timbering, which consists of one or two leg pieces, surmounted by a cap. According to some a door-set, consisting of one leg piece and a cap piece, is a half door-set, and according to others such a combination forms a single door-set; so that with the former two leg pieces and a cap piece constitute, a complete door-set, and according to the letters piece constitute a complete door-set, and according to the latter a double door-set. Following what appears to be the general rule, we shall retain the term half door-set, consisting of a single leg piece and a cap piece, and the term door-set to comprise two leg pieces with cap piece. The conditions for the use of door-set tim-bering require that the level shall have a rectangular, or trapezoidal section, that the roof shall be pretty nearly horizontal, and that the inclination of the sides from the vertical shall not be very great, and that the plane of the door-set shall be such that the lines of pressure shall fall in it, that will be at right angles to the direction of the level. already in a previous lecture described the various kinds

of joints which are most usual underground, and which are more or joints which are most usual underground, and which are more especially used to connect the legs with the cap pieces of a door-set. The cutting of the legs and cap piece for a door-set is sometimes carried out at the surface, and at other times underground. Were the sides of lodes as easily dressed as those of a level in coal mines it might be most advisable to cut the legs and cap pieces all to one size. The expense and trouble of preparing the sides of stone drifts and levels in metalliferous mines are such, however, that it is best to propose the place for the insertion of the decree. that it is best to prepare the place for the insertion of the door-set first, and then to cut the legs and cap piece to suit. The first dressing of the stone consists in cutting two notches in the floor for the insertion of the feet of the leg pieces. These should be cut at equal distances from the centre line of the level, and in such a manner that the line joining them is at right angles to the direction of the level. After these have been finished so that the better a manner that the line joining them is at right angles to the direction of the level. After these have been finished so that the bottom or face of the notch forms a horiztal plane, or a plane at right angles to the axis of the leg piece, the length of the leg piece is measured. It is best to make the foot for each leg piece perfectly horizontal, as this can be done most readily. The length of the leg piece will depend on the height of the level, and whether it is to be fixed in perfectly upright or inclined inwards at the upper end. This latter plan is frequently adopted, the inclination to the horizon, however, should not be less than 80°. The horizontal distance by which the upper end of the leg piece overhangs the lower end is called the "overhanging." No general rule can be given for the comparative lengths of the cap piece and the legs, being decided by the section of the level. When the joint between the leg piece and the cap piece consists merely of notching or hollowing out the top of the piece consists merely of notching or hollowing out the top of the leg pieces to fit the curve of the cap piece, the latter is first lifted against the roof, and whilst held in this position the feet of the two leg pieces are inserted in the corresponding notches, and then the upper ends are pushed up tight against the under side of the cap piece, the driving of the legs tightly and firmly into position then follows by means of heavy hammers. When this kind of joint then follows by means of heavy hammers. When this kind of joint is used the legs should have a perfectly vertical position. The use of such a joint is advisable where there is little or no space above the cap, so that it would be difficult to insert the latter when the legs are fixed in position. Where there is plenty of space above the cap piece the connection between the legs of the cap piece is generally by means of a scarf joint. In this latter case the leg pieces are first temporarily fixed in position by means of struts between the two leg pieces, and struts or sprags between the leg pieces and the sides of the level. The cap piece is then laid in position on the top of the legs, and held in position against them either by means of wedges against the roof or clamping irons. Where the character of the ground is such that the use of covering wood is unnecessary the door-set would be made to fit closer against the sides and roof of the level, and permanently fixed tight in position by wedging; the door set would be made to fit closer against the sides and roof of the level, and permanently fixed tight in position by wedging; in such a case each successive door-set will be of the same size, and generally from 3 ft. to 4 ft. apart. Where the sides and roof of the level are loose, and require to be supported by covering wood, this is usually driven in, commencing at the foot on each side, and finishing with the covering of the roof. The covering wood is generally placed behind the leg pieces, in exactly the same manner as we have mentioned in describing the covering of the roof by Firstenverziehen. Where the covering wood, which is placed on edge with the broad side against the legs, is composed of planks of considerable breadth, the attle packing is driven tightly in behind each plank as it is inserted, and in a similar manner the space between the roof and the covering wood on the caps is stowed up with dirt or attle.

or attle. Where, however, the level will have to be used for some consider able length of time, and consequently may require considerable repairs and renewals, a more complete manner of timbering the levels with door-sets is resorted to, corresponding to the method we have spoken of for timbering the roof as Firstenkasten. In such a case the first door-set is inserted in position exactly in the

manner we have above described, and at a distance of about 7ft. from this a second door-set is inserted in a similar manner. Between these a third door-set, of weaker timber, is inserted, in such a manner that the outside edges of the leg and cap pieces of this and the first door-set are in a line with the outside edges of the narrow bars, supported by wedges against the outside of the remaining door-set. The covering wood is now driven in behind the two first door sets, and resting with the front ends against the bars of the last door-set, beginning at the floor and rising to the roof, the attle packing being placed behind the covering wood as it is put in. The roof is afterwards covered in. In this manner the first field of timbering is finished, and the next one put in, which now requires only two door-sets, a weaker and a stronger one, with the narrow bars, as before described. The covering wood is now inserted by being driven in between the bars and the legs and cap pieces of the last door-set of the first field of timbering, the space having been kept open by means of wedges, the front ends of the covering wood resting against the outside of the narrow bars of the last door-set of this second field of timbering. The remaining fields and sets of timbering are now inserted, like the second.

The half door-set consists, as we have before mentioned, of a single leg piece with the cap piece. It is chiefly used for supporting the roof and hanging wall. The end of the cap piece next to the hanging wall is attached to the leg piece and the cap is formed by notching one end of the cap piece is inserted in the notch in the hanging wall, and the opposite end is raised so far as to be able to bring the leg piece under it after the foot has been inserted in a corresponding hole in the floor. The leg piece is then driven up into position by means of a heavy hammer.

When the side pressure is considerable, and more especially if the character of the roof and sides is loose, it will be necessary to place the door sets cl manner we have above described, and at a distance of about 7ft.

position by means of a heavy hammer.

When the side pressure is considerable, and more especially if the character of the roof and sides is loose, it will be necessary to place the door sets closer together, as at the salt mines of Berichtsgaden, where the door sets were placed only 3 feet apart, and lined behind with covering wood. As even this was found insufficient recourse was had to the so-called Stotgen timbering. This consisted of doorset timbering, the pieces of which the legs and cap pieces were constructed being 3 to 4 inches thick, and 5 to 8 inches wide. The doorsets were placed closer together, in such a manner, however, that the joints of the leg pieces came to be opposite the centre line of the cap pieces, and that the joints of the cap pieces were opposite the centre line of the leg pieces.

This kind of close timbering when of the ordinary dimensions, as at the salt mines in Austria of 6-inch or 5-inch square planed bars, forms the so-called close or planed or solid timbering; and, as in the above example of timbering used at Berichtsgaden, the caps were made to break joint with the leg pieces. At Aussee where this kind of timbering also is said to be used the timber is composed of half round wood, with the curved surfaces turned towards the inside of the level. With close or planed timbering where the legs and cap pieces break joint, as in the above example, the joining of the legs and cap pieces with scarf timbering will be more difficult, and require more care than where the joint is made by simple notching.

MODIFICATIONS OF DOOR-SET TIMBERING.—The simplest modification of ordinary door-set timbering is the so-called shoed timbering." The only difference between the so-called shoed set timbering." The only difference between the so-called rafter

timbering corresponds much more nearly to the name "rafter door set timbering." The only difference between the so-called rafter door-set timbering and the ordinary door-set timbering consists in the inclination of the legs at their upper ends more or less towards the inside of the level. Such an arrangement is suitable where the side pressure is considerable, and has a tendency to force the foot of the legs more into ground, and is sometimes resorted to as at means of lessening the length of the cap, and, therefore, its lia-bility to be broken under a considerable downward pressure, though in this case the line of resistance does not coincide with the line of downward pressures. In the coal mines of this country the door-sets are usually formed by placing the ends of the cap piece in notches in the sides of the level, and after the cap piece is thus

firmly fixed to drive the legs tight up beneath it.

Another modification of door-set timbering is that which we have called school door-set timbering, but which should, more properly speaking, be called rafter door-set timbering. This description, which is common in Cornwall, consists of two leg pieces, which are joined together at the top directly either by means of a scarf joint or a plane face, the legs being inclined against each other like the rafters of a roof. In some cases one leg is somewhat longer than the other, and has a notch cut in it (corresponding to the Anfall of an ordinary stempel), into which the end of the other leg fits. description of timbering is suited chiefly for wide lodes, in narrow lodes they have the disadvantage of being wasteful of timbering The outsides of the legs or rafters are covered with planking, &c and a considerable quantity of attle packing is then required to be placed upon them to protect them from falls of rock, &c. When the legs are notched into the sides instead of the floor of the level this forms the description of roof timbering called rafter timbering which we noticed at the conclusion of the last number.

THE TIN MINES OF TASMANIA.* BY CAPT. JOHN MUFFORD.

MR. CHAIRMAN AND GENTLEMEN: No doubt you are all aware that I am here this evening by invitation from your honourable secretary, at the request of this Council, to read a paper on the Tin Fields of Tasmania—a subject of much interest to the tin producers of this county. I have been very careful in preparing this paper not to import anything but facts or and the county. impart anything but facts, and the source of my information since the source of my information since I left that colony is the most reliable. Before I say anything about the tin fields I purpose to give you some idea of the country, its extent, and physical outline. It is bounded on the north by Bass Strait, on the east, south, and west by the South Pacific Ocean, and is between 40° 20' and 43° 40' southern latitude, and 144° 40' and 148° 25' east longitude; greatest length from north to south, 170 miles; greatest breadth from east toward 160 miles; are including islands. 148° 25' east longitude; greatest length from north to south, 170 miles; greatest breadth from east to west, 160 miles; area, including islands, 24,330 square miles, or 15,500,000 acres. That feature of the country which is most striking, and which has mainly determined its surface configuration, is the extensive development of the trap and basaltic formation. The trap formation occupies about 10,000 square miles, or nearly two-fifths of the whole colony. Granite also is said to occur in several of the mountains. The country of Dorset, in the north-east, contains a large tract of decomposed granite, as you can see by the map, which was prepared by Mr. Charles Gould, Geological Surveyor to the Government, and is the tin-bearing district known as the east and north-east coast tin fields, which was fully known as the east and north-east coast tin fields, which was fully described in my letters to the *Mining Journal* of Dec. 15, 22, and 29 1877, and Jan. 5 and 12, 1878, with the returns up to June 30, I stated the total quantity of tin ore exported for the six 2511 tons of tin. I also calculated the total quantity for the year would be about 4500 tons of tin, the whole of which is from alluvial washings. The George's Bay district is the extreme south-eastern end of the tin deposits of Tasmania; the tin here is of the ruby kind, mixed with a quartz gravel and sand under from 6 to 12 ft. of stiff enacious clay and peat, resting on a soft decomposed granite bottom of an irregular form. The Mount Cameron tin-producing district is very similar to the George's Bay in every respect, excepting that a small quantity of gold is found here mixed with the tin wash. a smart quantity of gold is found here inxed with the till wash. The Cameron Mountain rises abruptly from an almost flat country for miles around; this is the extreme north-east end of the deposits on this side of the colony. The two districts named above is in low lying ground, and expensive to work in consequence of the heavy amount of overburden to be removed. The central part of this district convises the whole of the Universe Review over Theorems's Maintain. amount of overburden to be removed. The central part of this dis-trict comprises the whole of the Upper Rangaroom, Thomas's Plain, and the Blue Tier, which is situated on an elevated plateau of from 1500 to 2300 ft. above sea level. The whole of this district is covered with a dense forest of big trees and scrub, which constitutes the principal stripping, and is the heaviest work the tin streamers have to perform. After the tin is got out and prepared for the smelting works it costs the producer from 10% to 14% per ton in transit in

* Read at the Mining Institute of Cornwall.

consequence of the roads being in such a wretched condition, and having to convey the same at least 40 miles to the nearest shipping port. One writer, in commenting on the condition of the roads and the manner and speed in which road-making is carried on from the ports to the tinworks, says—"They are progressing so rapidly? that I am afraid the millenium will arrive about the same time they are finished." This central part of the district is where they that I am afraid the millenium will arrive about the same time they are finished." This central part of the district is where the bulk of the tin will be produced from on this side of the colony, and the works producing the largest quantities are the All Nations, Union, Full Moon, Emu, Albert, Waverley, Clyde, Krushka Brothers, and Frome river, with a few others: four of these works have paid the holders good profits, and are worked on the co-operative principle, being working men's claims. Some of the works named have large areas to work out, and they will continue to be worked for years to come, but by far the greater number of tinworks here, as in all the colonies, is in narrow gulleys and small flats between the rapids, containing at most a few tons of tin ore. At the time of my visito the tinworks here the stripping was principally timber and ferns, with a few exceptions of a foot or two of decayed vegetable earth. I find now several of the best works have from 7 to 10 ft. of rubbish to remove in addition to the overgrowth, which adds considerably to remove in addition to the overgrowth, which adds considerable

I find now several of the best works have from 7 to 10 ft. of rubbish to remove in addition to the overgrowth, which adds considerably to the cost of production.

I see by the Tribune (a paper published in Hobart Town) that unless some reduction is made in the price of labour the tin mines on the east coast must shortly very materially reduce the number of hands that are at present employed. I also read in the Mercury Summary for Europe of Monday, Oct. 1, 1877, that an influential deputation waited upon the Ministry in reference to opening up communication with the tin mining districts of that colony. Sir James Wilson was the spokesman of the deputation, and in a most convincing speech pointed out the immense difficulty under which mining operations in Tasmania were carried on; he showed that for the first eight months of the year 1874, and of successive years up to and including 1877, the value of tin exported was as follows:—In 1874, 6835d.; 1875, 22,6894; 1876, 63,1634.; and in 1877, 199,6814. Sir James Wilson also pointed out that the returns of seven companies for the last six months showed the receipts to have been 15,5364., and the expenditure 15,5724. The worthy knight then expressed a hope that the only means by which the mining industry can be made payable—by opening up of roads—would be attended to. The value of the exports of tin and tin ore for the year ending December 31, 1877, is 283,1184. For the month of December, 1877, 199½ tons of tin valued 12,1704, and 417½ tons of tin ore, 18,7304. I will now return to the statistics given in the Supplement to the Mining Journal of Feb. 16, 1878, by me, as follows:—Tin ore produced by the Mount Bischoff Company's Works, at Mount Bischoff, from the formation of the company in 1873, to June 30, 1877, to which I shall add the returns for six months ending Dec. 31, 1877.

During first two years ending June 30, 1040 ... 299 9 0 0 0 During six months ending Dec. 31, 1875 ... 299 9 0 0 0 ... 250 19 3 14 ... 310 ... 31, 1876 ... 250 19 3 14 ... 310 ... 31, 1876 ... 477 14 0 10 ... 310 . Dec. 31, 1877 ... 1349

76 have left off making returns; add to the remaining 51 works 14 new ones that have entered the list during the last six months of 1877 and we have 65 works, yielding together 286 tons 13 cwts. 2 qu. 14 lbs, of tin ore, 18 of which produced 129 tons 9 cwts. 3 qrs. 24 lbs. or 10 tons and upwards. The remaining 47 works give a total of 157 tons 3 cwts. 2 qrs. 18 lbs., or less than 10 tons, which varied from 9 tons 3 cwts. 2 qrs. 18 lbs., or less than 10 tons, which varied from 9 tons to 8 cwts. per work for the half-year. The other works named above as having paid profits have not shown their returns separately, but they are given in the exports. The tin-bearing district extends over an area of about 800 square miles, the principal part of which is mountains or high barren rocky ridges. The tin is found in the flats, creeks, gulleys, and river beds in patches of a very variable character. A number of those deposits are close to the sur-

face, and have been rapidly worked out.

This brings me to the first question asked by Capt. John Boyns in
March last—Can tin be produced now in Tasmania at the present March last—Can tin be produced now in Tasmania at the present low price? My answer was—No public company have yet paids dividend, and tin can only be raised at a profit by a few co-operative parties. I find by this mail that the Bischoff Company have paid a dividend of 100 per cent, on the paid shares, otherwise the subscribed capital, for the first time. But it must be understood that the Mount Bischoff Company is a mining and smelting firm; their mining works is at Mount Bischoff, about 150 miles from the town of Laurceston by the only route open for treffic and the received the state of the st town of Launeesten, by the only route open for traffic, and the ore raised at the Mount has to be conveyed over that distance to the company's smelting works at Launceston, where they have six furnaces; they have also been purchasing and smelting large quantities of tin ore from numerous other works in the colony besides smelting their own ores. But it must be acknowledged that the Bischoff Works at the Mount is very rich in tin ores as the returns showworks at the Mount is very rich in tin ores, as the returns show—in fact, it is by far the richest and most extensive tin deposit in the mount is very rich in the mount is very rich in the mount in fact, it is by far the richest and most extensive tin deposit in the mount in fact, it is by far the richest and most extensive tin deposit in the mount in th in fact, it is by far the richest and most extensive in deposit in the colonies, and is very skilfully managed by Mr. Kayser, who is a thorough practical, hospitable, and kind-hearted gentleman. No doubt the Bischoff Works will continue to return a large quantity of tin for years to come, yet it must be plain to every practical observer that has been on the ground that such a large amount of or server that has been on the ground that such a large amount of ore as is at present coming from that quarter cannot be maintained for any very lengthy period. At Mount Bischoff there are two other works besides what is known as the company's, already described, the most important of which is the Stanhope. This company have been returning about 6 tons of tin per week; they smelt their own ores on the works in two furnaces with wood fuel and charcoal flux, which is obtained on the spot. The proprietary are principally Victorians, and they obtain their ores from the east side of the same basin as the Bischoff Company's brown face, the richest in this district. This company have worked up the richest part of their deposit, and the slate bottom is laid bare all up the side of the said basin to and the slate bottom is laid bare all up the side of the said basin to the ridge, which goes far to prove that the greater depth of wash in the Bischoff section is what is known in colonial phrasiology as a gutter, formerly a passage for water, which no doubt is one of the causes of its superior richness, and nearer the bottom the richer the wash dirt will be found in tin ore, as no doubt the bottom will be found too narrow in the form of the letter V. The other work mentioned here is the Don Charaches and in the letter of th tioned here is the Don Company's, and is evidently the tail of the s above, and is known as the north and south lodes described in my letters reregret to above. The yield from this company should be set down as 30 cwts, of tin ore per week by seven men; here the area of wash is very limited, and is not likely to give returns much longer—in fact, it must be almost exhausted. I have made mention of north and south lodes in this paper, also in a former letter, which I then described as a massive jumble of irregular outline, and not yet ascertained in either horizontal or vertical extent that may possibly prove to be true lodes, but if so, and productive, will prove to be an exception to all known rules. The lodes found in this district, like all other known rich districts for stream tin, is of no account.

Mr. Kayser, in one of his reports to the directors, published by the consent of the secretary, says—"The vein of tin ore I mentioned in my last report as being over 2 ft. thick, south of the new dam, I cut again about 13 ft from where I first struck it, and found it only

my last report as being over 2 ft. thick, south of the new dam, I cat again about 12 ft. from where I first struck it, and found it only 2 in. thick there, which shows how liable these veins are to mislead. On Dec. 25, 1877, he says—"Some of the faces at the mine show alterations such as commonly occur." On July 31 the same authority says—"During last week I have had some trouble with the bottom face, the large landslip mentioned in my last having not only shifted the wash dirt, but also a good deal of the bottom," which goes to prove that the bottom is rising, and will soon destroy their workings

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Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. Von Ghoddeck, Director of the Royal Bergakademie, Clausthal, The Harz Marth Germany.

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in that direction, when, as I before stated, the brown face will be the source of the Bischoff's greatest productions, but to fix any limits to the quantity of ore or to the time that will be required to exhaust the same, is beyond my ability, yet I believe they have reached the taumit in the shape of returns, and a falling off must shortly ensue. It appears to me that some people have put a wrong construction on the term lode (but not intentionally) as used in the colonies. A lode means a run of wash dirt or sand mixed with tin ore in any form. What is understood to be a lode here is known as or called form. What is understood to be a lode here is known as or called form. What is understood to be a lode here is known as or called form. lode means a ran of wash dark of sadd linked with the ore in any form. What is understood to be a lode here is known as or called a vein of ore or a reef in that country, except by Cornish men. No a vein of ore or a reef in that country, except by Cornish men. No true lode has yet been discovered in Tasmania that will pay to work for tin; and I quite agree with the remark of "Australasia" in the form of Thursday, 25th inst., "that the alluvial tin was not west Briton of Thursday, 25th inst., "that the alluvial tin was not formed in or washed from lodes, but was formed in the faces of the formed in or washed down by the action of the water." This is when granite, and washed down by the action of the water. This is when it is found in granite, as on the east and north-east tin fields of its found in granite, as on the east and north-east tin fields of its found in granite, and very strongly resembles lode tin, and appears in the form of a pipe or stack of tin ore, formed in conjunction with an elvan or porphyry dyke, thrown up by some very powerful internal force.

As I stated at the beginning of this paper I had been careful not to insert anything but facts. I believe I have closely adhered to that statement, and without prejudice of any kind.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

The monthly meeting of members was held in the Geological Museum, Dudley, on Monday, Mr. W. North presiding. There were also present among others Messra: H. Johnson (Vice-President), W. B. Collis, Cole, Fellows, Rogers, Meacham, Latham, Marten, Bagshaw, J. Hughes, Hay ward, &c.—The Secretary (Mr. Alex. Smith) reported that he had written to Mr. Allport for a paper on the igneous trap rock, but that gentleman had replied that he was too full of engagements to comply with the request, but at a future time he should be willing.—During the reading of the minutes of the previous concil meeting it was shown that the first excursion was to be to the Hamstead sinking, and the second to the Cannock and Huntington sinking.—Mr. Thomas Webster, assistant colliery manager, Tividale, was unanimously elected a member.

Mr. J. Williams, teacher of the chemistry class in connection with the Institute, read a paper on "Spontaneous Combustion," which was fully illustrated by experiments. The author spoke of the interest of the subject to mining engineers, and said spontaneous combustion was liable to occur wherever substances having chemical affinity for each other were brought together. Oxygen played a most important part wherever carbonaceous substances were exposed to its action. A piece of carbon exposed to the air absorbed the atmospheric gases. In coal winnings large quantities were ground quite fine, and this, like carbon, was capable of great absorption. Atmospheric moisture brought to coal and the oxygen into intimate contact, and instantaneous combustion occurred. Some asserted that iron pyrites were the cause of spontaneous combustion, but let them take charcoal, which contained no pyrites, and that was sufficient to prove that it was not the pyrites. All that could be said in favour of iron pyrites was that chemical action produced heat, but not sufficient to produce spontaneous combustion. The best method to prevent spontaneous combustion of

was now well recognised as a marine one. The paper then went on to show different sections in different parts of the country where the limestone had been found. Mr. Jones, one of the authors, had found the limestone frequently, and in a paper read in 1870 he wrote that it was probably existing in the South Staffordshire coalfield, but in such slight quantities as to have escaped the notice of the sinkers. At Sandwell the limestone was found at 123 yards deep, and the thick coal at 418 yards. At Hamstead the limestone was found at 186 yards, and was 14 in. thick. The difference in depth was probably due to the inclined ground and the respective levels of the pit tops. The authors did not affirm that the limestone was continuous throughout the country, but it extended over very large tracts, and afforded the mining engineer an excellent datum to go upon. But although continuous itself it did not follow that the strata above or below were distributed with equal certainty. The question of finding coal below would have to depend on the known character of the district, for the limestone had been found in a district where the fields were marginal to a great coal basin, and consequently less depth for holding carboniferous deposits. In conclusion, the authors said they had shown the value of the limestone as a datum to go upon, and advised that in sinking pits through the upper coal measures the limestone should always be looked for.—A vote of thanks was passed to Mr. Jones and to Mr. Johnson, who also exhibited a section of Sandwell sinking, and presented a piece of limestone to each member.—Mr. Jones, in reply, said the members should disabuse their minds that the paper referred in any way to any commercial undertaking in the district. Mr. Johnson offered his specimens to any person sinking in the neighbourhood.—Mr. Collier, by means of a miscroscope, exhibited the fossil,—The Secretary explained, for the inventor, a new lubricator, of Messrs. Torkington and Heys, exhibited by Messrs. Lawrence and Glydon (Birmingham)

New Locomotive Engine.—An interesting series of experiments are about to be carried out at the Royal Arsenal, Woolwich, to test the efficiency of a special kind of locomotive engine which has been constructed for the new trench railway. This railway is designed to be laid upon the surface of the ground wherever it may be found necessary to construct earthworks or to transport material, the ordinary methods of reducing irregularities by cuttings and embankments being out of the question in field operations. The engine is, therefore, designed to ascend and descend sharp gradients, and is also fitted with an apparatus for hauling up and lowering loaded trucks. A hill too steep to be ascended with a load behind may be surmounted by the engine alone, and it may then wind-up the load after it. An experimental railway running up and down hill in irregular fashion is being formed near the butts in the Government Marshes adjoining the Royal Arsenal, for the purpose of the trial.

Marshes adjoining the Royal Arsenal, for the purpose of the trial.

ROADWAY CONSTRUCTION.—At the Society of Engineers on Monday (Mr. R. P. Spice, President, in the chair) a paper was read by Mr. Henry S. Copland on Modern Roadway Construction. The author first adverted to the extent to which the work of roadmaking was constantly going on at the present time, and noticed the progress made by the various nations of antiquity, the state of decay into which the mediæval roads had been allowed to fall, and the various attempts made to improve them since the beginning of the present century. He then described the principal systems of roadway construction now in use, and pointed out the extent to which, he considered, they met, or failed to meet, the requirements of a good modern roadway; namely, safety, easy traction, noiselessness, freedom from dust and mud, durability, facility, and cheapness of construction, maintenance, and repairs to itself, and to the gas and water mains, &c. He explained the principles upon which, with a view to avoiding the defects of previous systems, he had designed the Asphaltic Wood Pavement, the use of which was now increasing. This pavement consists of a bed of concrete, with a layer

of asphalte over it. Upon this are laid transverse courses of red pine blocks, with intermediate spaces. The spaces are filled in partly with heated mastic asphalte, and then with coarse lime and gravel grout, flushed with hot air, to the surface of the roadway, about an inch of coarse gravel is then spread over the roadway and left to be worked in by the traffic. The author finally examined into the expense of construction and maintenance of the various yet roads, Macadam was the cheapest in original cost, it was by far the most expensive over a term of years, whereas, although his Asphaltic Wood Pavement cost more at first, it was cheaper, over a lengthened period, than Macadam, or most other roadways; and would compare tayourably with other systems, in that and most of the requirements of a good modern roadway. of a good modern roadway.

TECHNICAL EDUCATION, AND THE CITY GUILDS.

of a good modern roadway.

TECHNICAL EDUCATION, AND THE CITY GUILDS.

For some years past the Turners' Company have offered great encouragement to workmen connected with the trade with which the Guild is identified, by awarding annually their silver medals and the freedom of the company to those who have displayed special skill in their trade, whether at the time of competing they occupied the position of master, journeyman, or apprentice. In order to extend this encouragement to all branches of the trade the material to be operated upon has been from time to time varied, and it is now announced that for the current year the subjects of competition will be turning in wood, throwing and turning in pottery, and diamond cutting and polishing. The competition includes turning in both hard and soft wood, and in a warding the prize the qualities considered will be—beauty of design, symaetry of shape, utility, and general excellence of workmanship; exact copying, so that two objects produced (such as two cups, vases, boxes, or other articles) may be facsimiles in every part or exact measures of capacity; fitness of the work and design for the purpose (for instance, turned work for portions of domestic or church furniture); ability to turn whether circular or oval, in both classes of wood; and novelty in application of turning or in design. Carving and polishing is admissible, and it skilfully done any additional effect produced by it will be considered, but it must be subsidiary to the turning. The candidate is permitted to make his own selection from the above conditions, but he who best fulfils the largest number, including the most important qualities, will be preferred. The work must be all hand-turning, produced in the lathe without special rest or tool apparatus, and the carving must be the work of the exhibitor. The specimens are to be limited in size to 24 in, high and 12 in, in diameter. The first prize is the silver medal and freedom of the company; the court medertaking, subject to the consent of the Court

competitors. The specimens exhabited will be classified as brilliants weighing more than one carat, brilliants under one carat, single-cut, and roses. In each class a prize will be given if the specimens entered are considered worthy, but the first prize of the freedom of the company, and a sum of 10t, toge, ther with the freedom of the City of London, will, subject to the consent of the Court of Aldermen, be adjudged to the candidate who shows the highest excellence of workmanship in the greater number of the classes. In making their award the judges will chiefly consider the symmetry of form and proportion, and it is mentioned that the stone should be no thicker than is necessary to produce the maximum brilliancy, accuracy of finish of facets and excellence of polish, form and relative proportion of facets, and perfectness of edge. It is noted that the girdle should be even throughout, and polished up to a sharpedge. In addition to the principal prize silver and bronze medals, certificates of merit and the 20th already referred to will be distributed according to the discretion of the judges. Candidates for the first prize must send in specimens of work in not less than two out of the four classes. The honorary secretary to the competition committee—Mr. R. Loveland Loveland—will furnish all details as to the character of exhibit most likely to succeed, and the mode and time of sending in, and intending competitors would do well to obtain direct information from him, but with regard to diamonds. the character of exhibit most likely to succeed, and the mode and time of sending in, and intending competitors would do well to obtain direct information from him; but with regard to diamonds, it is remarked that it would be preferred, if any rough diamonds of important size could be submitted to the judges before being cut, in order that they may see the form, size, and quality of the stones, and that they may be enabled the more easier hereafter to judge of the remaining weight and brilliancy, or if possible a plaster cast of the original crystal should accompany the finished specimen.

And lastly even amateur turning is not ignored, for it appears that Past-Master C. Christopherson has placed at the disposal of the company 10l. to be awarded as a prize for the best specimen of amateur work in ornamental turning in either ivory or hard wood executed during the period of competition. Any lathe apparatus may be used. With regard to the trade prizes the competition committee have certainly been provided with ample pecuniary support, the court of

titor, and his age, if an apprentice, and in all cases a certificate of good conduct, and a certificate or declaration that he is in the trade, and that the work is by his hands only, and has been executed during the period of competition; the competitor may be required to do in the presence of the judges a portion of the work similar to the successful exhibit. The envelopes will not be opened until the judges have made their report. The specimens sent will remain the property of the competitor. Care will be taken of them, but the court will not hold themselves responsible for their safety. The

GEOLOGICAL SCIENCE AT CAMBRIDGE.

Upon the occasion of presenting the first Lyell medal and the entire proceeds of the fund to Prof. John Morris, F.G.S., the President of the Geological Society took the opportunity to remark that in making the award to one whose name was so intimately connected with the progress of geological science the council unanimously felt that they were best carrying out the intentions of the founder and attaching an importance to the medal which would show that, though founded later, it takes equal rank with other medals at the disposal of the council; and the senate of the University of Cambridge have now shown an equal appreciation of Prof. Morris's ability as a teacher and of the science which he cultivates in conferring upon him the degree of Honorary Master of Arts, the grace for which was brought forward and passed on Thursday. The exertions of Prof. Morris as a geologist extend over the long period of more than 40 years, and for more than three-fourths of that time he has been one of the most active of the Fellows of the Geological Society, almost constantly occupying a place on the council, and at present he holds the position of President of the Geological Association. He has always recognised the fact that "science without being applied is but an intellectual fragrance," and that "art guided by science is the master power of the world."

Whenever the opportunity presented itself for the encouragement of geological study, Prof. Morris has been most anxious to lend his assistance, and the instruction which he imparted during his 20 years occupation of the professorial chair in the University College, London, was by no means limited to his teaching within the college Council unwilling entirely to sever the connection, formally voted him the title of "Emeritus Professor," in consideration of his eminence in connection with the science of geology. His Catalogue of British Fossils has long taken rank as a standard work, and at the time of its publication the Geological Society award

of geology and paleontology, and immense power of memory to be able to apply it.

For several years Professor Morris delivered courses of popular lectures on coal and coal mining at the Coal Exchange, which were highly appreciated, and he has also enlightened appreciative audiences upon his favourite subject, both at the Royal Institution and London Institution, and for two years he lectured at Cambridge for the late Prof. Sedgwick. His sound knowledge was also recognised in his appointments of examiner in Natural Science at Cambridge for the Tripos, and for the University of London, the War Office, the Admiralty, the Civil Service, and the Indian Engineering College at Cooper's Hill. He was also the recipient of a handsome and substantial testimonial, in the promotion of which the late Sir Roderick Murchison and John Phillips, of Oxford, took the principal part; and still more recently the Geological Society of Vienna and the Natural History Society of Philadelphia have recognised his merit in sending him diplomas of honorary membership, and he has also been presented with the freedom of the Turners' Company and of the City of London.

the City of London.

The honour now conferred by Cambridge may well be regarded as the highest yet awarded to him, and it may be hoped that he may long live to enjoy it, and at the same time assist in promoting that science, his devotion to which has entitled him to it.

PRIZE BLOW-PIPE APPARATUS.

PRIZE BLOW-PIPE APPARATUS.

The award in the recent competition of the Society of Arts silver medal, and Colonel Croll's prize of 10% to Messrs. Letcher Brothers, of St. Day and Camborne, for their Blow-pipe Apparatus has already been announced in the Mining Journal, and a description of the standard box deposited with the Society of Arts, and which the recipients of the prize undertake shall be equalled by every box sent out has now been published. The apparatus and reagents are contained in a stained deal box, 10½ in. by 4½ in. by 3½ in., which weighs when full 3 lbs. 9½ ozs. The box is provided with lock and key. It tontains 42articles—blow-pipe, spirit-lamp, grease-lamp, hammer, anvil, pestle and guard, platinum forceps, brass forceps, lamp tweezers, test tube holder, chisel, magnet, file, scissors, cupel striker, bone spatula, platinum wire, platinum foil, tinfoil, magnesium ribbon, pastille and cupel holder, charcoal pastilles, boiling dish, open tubes, closed tubes, glass rod, blue glass, litmus paper, turmeric paper, Brazil wood paper, soda paper, carbonate of soda, microcosmic salt, borax, bone ash, fluor-spar, assay lead, nitrate of cobalt, bi-sulphate of potash, oxide of copper, chloride of silver, and potassic iodide and sulphur. The packing is so arranged that the greater part of the apparatus and reagents are contained in a wooden block with a variety of holes and recesses, each receiving a separate article. It is, therefore, simply necessary to lift out the block, and easily, as each article fits into its own place, and an unfilled opening at once indicates that something is missing. If ordinary care is used, therefore, the traveller need not be afraid of leaving anything behind. No paper, wadding, or pads are required, and yet the contents of the box are securely packed.

The blowpipe is an improved brass Plattner. The spirit lamp is of fin, with a screwed cap, which, with the addition of a leather washer, prevents escape of spirit. The grease lamp is a comparatively recent addition to the blowp

Past-Master C. Christopherson has placed at the disposal of the company 10% to be awarded as a prize for the best specimen of amateur work in ornamental turning in either ivory or hard wood executed during the period of competition. Any lathe apparatus may be used. With regard to the trade prizes the competition committee have certainly been provided with ample pecuniary support, the court of the company having placed at their disposal a sum of 50%, and the Baroness Burdett-Coutts has in addition to her gift of 20% for the diamond competition given 15% towards the wood, and 15% towards the pottery money prizes. The different objects in wood, pottery, and amateur turning must be delivered free at the Mansion House, London, during the week ending October 5, and will be on view there during the following week. The conditions of competition are of the usual kind. Each exhibit must be marked with a private mark or motto, and numbered, and accompanied by a sealed envelope marked with the same mark or motto, and containing the name and address of the competitor, and his age, if an apprentice, and in all cases a certificate of good conduct, and a certificate or declaration that he is in the trade, one end serves to receive bone ash for cupellations. In an apparatus and possible and holder are merely a modification of the lamp will burn for more than two hours without requiring any further supply. Any sort of grease may be used, suce as talletther's lamp will burn for more than two hours without requiring any further supply. Any sort of grease may be used, suce as talletther's lamp will burn for more than two hours without requiring any further supply. Any sort of grease may be used, suce as talletther's lamp will burn for more than two hours without requiring any further supply. Any sort of grease may be used, suce as talletther's lamp will burn for more than two hours depoined in private for the passille and be used, suce as talletther's lamp will burn for more than two hours of the grease lamp is lost, which consists the unblackened sides may be used as streak plates, and a cavity at one end serves to receive bone sals for cupellations. In an apparatus of this kind, intended solely for qualitative experiments, it was thought unnecessary to have the special cupel holder designed by Plattner, and it is found that cupellations can readily be parformed on a little bone ash pressed into the pastille holder with the cupel striker.

Turning to the reagents, it will be found that there are the means of testing for all the common elements, though the experimenter

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who wishes to test for traces of nickel in the presence of much cobalt, manganese, or iron will have to spend a few pence in buying a little bead of gold for collecting the nickel in the usual way. The carbonate of soda is guaranteed to be free from sulphur, and the assay lead from silver. The latter is prepared by precipitation from the acetate. The assayer may, therefore, rest assured that any trace of silver that he finds was really contained in the ore tested, and not in the resgents. The collection is generally regarded as a good guinea's worth, whilst the payment of a few shillings additional for mahogany box, platinum-nozzled blowpipe, and such like, will place the blowpipist in possession of a handsome and complete working set at a very moderate cost.

THE CALENDAR MONTH MINE PAY.

The view taken in the *Mining Journal* in connection with the return to the calendar month system of payment at Devon Great Consols has naturally given dissatisfaction to some of those affected by the change; and with reference to the editorial statement that the rechange; and with reference to the editorial statement that the return to the calend it is not a workman's question," and that the introduction of the four-weeks month "was probably the most foolish step ever taken in the interest of Cornish and Devonshire mining," the Rev. D. P. Alford, of Gulworthy—rather a suggestive name by the way,—says that "the question naturally occurs to one—what mysterious sources of information are open to the Mining Journal which enable him to know better than the men themselves have their integers and open forts, are affected by this integers and comports are affected by this integers. Journal which enable him to know better than the men themselves how their interest and comforts are affected by this detested system?" Now, our answer to this is, unfortunately perhaps, of a character which may convince the reverend gentleman that by admitting that during the period which has elapsed between the determination to make the change and the carrying of it into effect there has been a revelation, it is quite unnecessary to attribute anything as he has done, to mystery or inspiration. We are as anxious as Mr. Alford can possibly be to promote the welfare of working miners and their families, and should earnestly advocate everything that would prevent the diminution of the wages fund distributable that would prevent the diminution of the wages fund distributable in the mining districts of England; and it is not difficult to show that, especially in the case of Devon Great Consols and some other mines in the same district, that to the working miners directly and to the monthly men indirectly the return to the calendar month is

to the monthly men indirectly the return to the calendar month is absolutely beneficial.

To make the subject thoroughly understood we shall be compelled to draw a little upon our historical knowledge. Upon one Monday early in 1872 a meeting was held in Truro for the purpose of introducing the "13-pay" system, the leading promoter of the movement being a purser, the indirect object being to secure the seat of a certain member of Parliament by increasing his popularity. All classes it is true were represented at the meeting, but the working miners occupied but a subordinate position, and the programme of resolutions drawn up by the committee who convened the meeting left no doubt that it was not intended at the time to extend any substantial advantage to the working miners proper. Even the first of resolutions drawn up by the committee who convened the meeting left no doubt that it was not intended at the time to extend any substantial advantage to the working miners proper. Even the first resolution was—"That this meeting desires most heartily to recognise the principle that the working miner should earn one-fifth more wages in the five-weeks month than in a month of four weeks." This principle neither the directors of Devon Great Consols nor any other advocate of the calendar month system have any intention to depart from either now or hereafter. And this is one of the leading reasons for returning to the calendar month system instead of ordering a general reduction of wages; other reasons will be referred to presently. The change from the lunar to the calendar month affects precisely those whom it is intended to affect, but leaves untouched the wages of all who are paid by the day, by the fathom, or by the ton. These latter are at all times paid almost exactly in proportion to the price of mineral, and with regard to many of them the rate of wages which they receive varies every few months—a few adverse standards will lead to the bargains being set at a lower price for the ensuing month, and similarly a few favourable standards will enable the taker to get a better price. The wages of those paid by the day vary similarly, though necessarily less frequently. The change from the calendar month to the lunar month really secured no advantage to the real workers in the mines and on the dressing-floors, but gave the agents and monthly men an advance of 3% to 15% on the annual amount of their wages. This rise was secured by principal and assistant agents, enginemen, timbermen, and so on, who practically got an advance of about 8 to 10 percent. The change at the present time only affects the same men, and owing to the change in the prices of necessities the reduction at the present time is not equivalent to the advance six years ago.

But the calendar month system is of more importance to adventurers than m

turers than many persons suppose, and frequently involves the question of continuing or closing a mine. And the effect is more powerful in times of depression than when mining is prosperous, because in the one case it results in a direct extra payment out of pocket, and in the other it merely diminishes the dividends received. It must be acknowledged that mine adventurers are powerless to arrange the general commercial practice of the country, and also that it is customary to adopt the calendar month both in selling produce and in making commercial bills in payment for it. To ask abuyer of copper, arsenic, or aught else to pay by bill at eight weeks instead of at two months would frequently prevent a sale, as it would disarrange the buyer's money affairs, and to offer a bill at "two lunar months" after date for discount would certainly be objectionable, and give rise to difficulty in obtaining cash. Now, when a mine is in adversity it is essential that the proceeds of minerals sold should come in periodically as the costs fall due, in order that the adventurers may feel as little as possible the constant draw upon their pockets for balance of costs, and it is universally admitted that the four-weeks system has a great tendency to throw costs in arrear of returns, and thus disgust the adventurers who are supplying funds. The periodical necessity of an extra call to meet the thirteenth month's cost has driven many capitalists out of mining altogether, and this is a matter which should surely be avoided in the interest of all; for although it may be hoped that the prices of metals have now reached their lowest point, it is well understood that even in prosperous times it is necessary to secure the largest possible amount of speculative enterprise in order to keep up the number of dividend-paying mines. As compared, then, with the lunar month system it will be seen that the calendar month system has numerous advantages. Nine-tenths of the mines started are enabled to commerce operations solely from the belief enter regulated, in some cases almost fabulous profits are secured with comparatively small cash outlay; and it is this feeling which has done so much to keep mining enterprise alive and satisfy capitalists

MANUFACTURE OF CHLORIDE OF LIME.—A new process for the expeditious manufacture of dry chloride of lime has been in-vented by Mr. E. Maletra, of Paris, which consists in the employment of mechanical means for stirring, agitating, or mixing the powdered lime and the chloride of lime as fast as it is formed, in such a manner as to expose all the molecules of these substances in such a manner as to expose all the molecules of these substances in succession to the continuous action of the gaseous chlorine, which is introduced under favourable conditions for combining with the lime, and is rapidly absorbed by the latter. In order to ensure regularity, it has been found necessary to couple at least two apparatus together, so as to admit of the chlorine being directed into either as required. The process is very rapid, and is carried out with great facility, and without any waste of chlorine. The progress of the operation may be constantly watched by persons near the apparatus, which emits no injurious odours. The apparatus is cheap in construction, and occupies but small space. The manuis cheap in construction, and occupies but small space. The manu-

facture may be regulated at will, as examples of absolute homogeneity (as may be ascertained by testing) may be taken at any time during the operation. As the chloride of lime manufactured in this manner is homogeneous in every part it is not liable to become demanner is homogeneous in every part it is not liable to become de-composed, as is the case with chlorides manufactured in layers, more or less deep, and in a state of rest, and a source of considerable loss is thereby avoided in the manufacture of this product, which is liable to deterioration from the influence of climate and other influences resulting from its composition.

FOREIGN MINING AND METALLURGY.

FOREIGN MINING AND METALLURGY.

Transactions are stated to have increased during the last few days in the district of which St. Dizier is the centre. Some of the rolling-mills are now provided with orders for one or two months in advance, and this has produced a little more firmness in the prices of some articles. We can scarcely, however, call this improvement an advance. Thus the proprietors of certain works had temporarily reduced their tariffs, having collected some orders in consequence of the reduction, they hastened to return to the old rates, not wishing to prolong the sacrifice which they had made in order to assure for some time employment to their establishments. If the rolling-mills of the Champagne group have been enabled to maintain a relative activity, they owe this result to the constant efforts of industrials to develope the use and employment of specialities. In the Nord quotations for iron do not appear to have any fixed basis, but they vary according to the works, and according to the importance and composition of orders, from 6½ to 6½ 6s. per ton.

The company formed for working the Netherlands State Railways has decided upon experimentally adopting Serres and Battig iron permanent way for a distance of 2½ miles on the Boxtel and Eindhoven line. The Rhenish Railway Company has also decided to make a trial of the system, but upon a smaller scale. The Austrian State Railways Company has decided upon introducing automatic steam carriages upon the Belpaire system upon certain of its lines upon which the traffic is comparatively small. Upon such lines as these the carriages in question are expected to render very great services.

The French coal trade has not exhibited much change. The Anzin

upon which the traffic is comparatively small. Upon such lines as these the carriages in question are expected to render very great services.

The French coal trade has not exhibited much change. The Anzin Mines Company has now decided upon adopting paractures upon the Cousin system. The recent adjudication of the coal contracts for the Belgian State Railways showed that extreme feebleness now characterises prices as well at Liége as at Charleroi. The proprietors of the sugarworks being impressed with the belief that coal quotations can only advance if they experience any change are making their arrangements for the ensuing season without hesitation. The imports of coal into Belgium in the first three months of this year are officially returned at 169,000 tons, as compared with 159,000 tons in the corresponding period of 1876. The exports of coal from Belgium have also slightly increased this year. The efforts of Belgian coalowners to obtain new outlets for their products would thus appear to have been not altogether unsuccessful.

The Belgian iron trade has not presented much animation or change. The imports of iron minerals and lemailles into Belgium amounted, however, in the first three months of this year to 199,000 tons, as compared with 151,000 tons in the corresponding period of 1877, and 185,000 tons in the corresponding period of 1876. The imports of rough pig and old iron into Belgium in the three months of this year were 60,000 tons, against 53,000 tons in the corresponding period of 1876. The exports of rough pig and old iron from Belgium declined to 1627 tons in the first three months of this year as compared with 3000 tons in the corresponding period of 1876. The exports of rough pig and old iron from Belgium declined to 1627 tons in the first three months of this year as compared with 3000 tons in the corresponding period of 1876. The exports of rough pig and old iron from Belgium declined to 1627 tons in the first three months of this year as compared with 3000 tons in the corresponding period o

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week, although nothing new politically has transpired, there is a tendency to take a calmer and even more hopeful view of the situation, under the influence of which a little more business has been done, but it is not likely people, as a rule, will venture to make investments till a more setted state of affairs is

In shares of iron and coal companies Scottish Australian have ad-

In shares of iron and coal companies Scottish Australian have advanced 2s. 6d, per share, and this company's sales for February were 13,740 tons. Chillington have declined X, and Ebbw Vale X. The Pelisali Company have called up 2t. 10s. on their shares, payable on June 1. As there are \$107 of these shares the capital thus raised will be 20,267t. Antrin, A, are at 48s. 6d.; ditto, B, 2; Andrew Knowles and Son, 4X dis.; Bowling, 72½; Cardiff and Swanses, % to 1½; Carnforth, 115½; Chapel House, 3 to 3%; Chillington, 2½ to 3; Consett, 17½; Crown Preserved, 1½; Ebbw Vale, 6½ to 7; Great Western, 2; Henry Briggs, A, 11½; John Brown and Co., 10½ dis.; John Bagnali and Sons, 1¾; Rhymney, 5; Sheepbridge, 18½ dis; Staveley, B, 55s. prem.; Thorp's Gawber Hall, 53s. 9d.; Ulverstone, 8; West Cumberland, 7½ to 8½; West Mostyn (pref.), 1½; Workington, 15.

In shares of foreign copper and lead companies, Tharsis old and new shares have both been in request, and advanced 2s. 6d. each, Cape also 5s. higher, but Rio Thiot Five per Cent. are reduced 15s., and Panulcillo 5s. The Rio Tinto meeting, on Tuesday, passed off as favourably as could be expected under the circumstances. The Chairman seems to take a hopeful view of the prospects, and referring to the ordinary shares, while not saying a dividend would be paid on them, expressed the belief that another year would witness a change in their position. This month's report from Yorke Peninsula is considered very good. There were on hand on Feb 28 150 tons of 17 per cent. or end 625 tons of dredge ore of 5 per cent. 100 tons were to be shipped. It is notified the South Australian Government have sent amongst their exhibits to the Paris Exhibition a blook of 12 cwts. of yellow ore of 22 per cent., broken from a larger block in a stope in the Kurilla lode on this company's property. Hultafail are at 77s. 6d. to 82s. 6d. Panulcillo, 10s. to 20s.

In shares of gold and sliver mines, Richmond is 2s. 6d. higher, owing to the reports that the mine is doiny so well: the run announced this

pfylde are at 48. Commentary, 18. to 19s. Rookhope, 18s. to 19s. Van Consols, 7s. West Tankerwille, 19s. In shares of gold and silver mines, Richmond is 2s. 6d. higher, owing to the
reports that the mine is doing so well; the run announced this week is lower,
870,006, owing to two days having been lost by a slight accident to the machinery.
The Flagstaff meeting is to be on the 18th instant. Last Chance have advanced
owing to advices that rich ore has been struck, also that the machinery has
arrived, and is being erected. In the four weeks ending Feb. 27 4900 tons of quartz
were crushed by the Port Phillip Company, producing 1869 ozs. gold. The result
is a profit of 7291, which with previous balance of 20291, makes 27581; of this
sum 16004, is divided, and the balance carried forward; the Port Phillip Company's proportion of the amount divided is 6501. The Pestarena United returns of
gold for April are in all 405 ozs. Cedear Creek are at 5s. to 6s. Colorado United,
60s. to 60s. Eberhardt, 654. Emma, 1s. 6d. Flagstaff, 11s. 3d. Frontino,
37s. 6d. Javali, 6s. Rossa Grande, 2s. to 4s. South Aurora, 2s. 6d. to 5s. St.
John del Rey, 310.
Oil companies shares have been in request. Young's Paraffin have advanced
and the production of the schemes.

37s. 6d. Javall, 6s. Rossa Grande, 2s. to 4s. South Aurora, 2s. 6d. to 5s. St. John del Rey, 310.

Oil companies shares have been in request. Young's Paraffin have advanced 5s.; Uphall, 1s. 3d.; and Oakbank (new), 3d. Price's Candle are at 10½ to 11.

The balance sheet of the Oakbank Company for year ended March 27 last shows a net available profit of 7011., after providing for maintenance and writing off the usual 10 per cent. depreciation from plant and property accounts; a dividend of 15 per cent. will be proposed out of this profit at the meeting on the 21st inst., which will require 679c., leaving 261l. to be added to the reserve fund.

Miscellaneons companies shares show little alteration. Palmer's Shipbuilding are firmer, as it is understood the company is in a position to pay a dividend. Hamer's Salt offer at 5. Hopkins, Gilkes, and Co., 9% dis.; New Sombrero Phosphate, 7½; Native Guano, 52s. 6d.; Wagon companies are neglected at following prices:—Lancaster, 75s.; Midland, 97%; Scottish, 11; Swansea, 52s. 6d.; Watefield Rolling Stock, 22s. 6d.; and Yorkshire, 13½. In chemical companies Langdale's are unsitered at 95s.; Lawes' have advanced at 7% to 8%; ditto 7 per cent. (pref.), 10 to 10%; Goux Manure, 10; Newcastle Chemical, 16s. lower, at 20s. to 25s. (7l. paid) on sales to avoid the call.

The following calculations show the amount per cent. yielded on investments at present prices in the shares named, based upon the last average yearly dividends being maintained:—1. In coal and iron companies—Andrew Knowles and Sons would pay 12½; Arniston, 6½; Antrim, A. 4; ditto, B. 4½; Senhar, 7; Bolckow, Vaughan, A, 5½; ditto, B, 5½; Cairntable, 11½; Charles Cammell and Co., 8¾;

ditto 6 per cent. debentures, 5%; ditto 5 per cent. debentures, 4%; John Brown and Co., 8%; ditto 5 per cent. (preference), 5; Shaspbridge, 5%; ditto fave, 6%; Staveley, A. C., or D. 5%; ditto, B. 6; ditto 5 per cent. (preference, 8%; ditto, 6 per cent. (preference, 8%; Great Laxey Mine would pay 10%. St. John del Rey, 11%. Tharsis, 5; ditto (new), 8%. In oil companies—Dalmeny would pay 13%; Oakbank, 12%; ditto (new), 11%; Uphall, 12%; Young's Parallin, 10. In wagon companies—Birling, 12%; ditto fave, 11%; Starbuck, 7%; Sheffield, 7%; ditto 6 per cent. (preference), 6; Yorkaling, 5%; Starbuck, 7%; Sheffield, 7%; ditto 6 per cent. (preference), 6; Yorkaling, 50; Ribpuilding would pay 1; Lawe's Ohemical, 7 per cent. (preference), 7; Lives, 50inpuilding would pay 7; Lawe's Ohemical, 7 per cent. (preference), 7; Lives, 50inpuilding would pay 7; Lawe's Ohemical, 7 per cent. (preference), 7; Lives, 60inpuilding, 80inpuilding would pay 7; Lawe's Ohemical, 7 per cent. (preference), 7; Lives, 60inpuilding, 80inpuilding, 80inpuildin

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10) .	••	10	***	nil		3		
10	•	**	10	***	nil		nii	Monkiand Iron and Coal (Limited)	558,
10		••	10	***	5	***	4	Ditto Guaranteed Preference	35s,
100			100	***	nil	***	nil	Nant-v-Glo & Blaina Ironworks over (r.	608,
		**	6	***	nil	***	nil	Omos and Cleland Iron & Coal (T. & D.)	19
		**	ĭ	***	15	***	15	Scottish Australian Mining (Limited)	7s. 6d.
		•••	10s		15		15	Ditto New	
Sto			100		nil	***	nil	Shotts Iron	158.
1000		••	100	***		•••			91
1							CU	PPER, SULPHUR, TIN.	
1		***	4	***	-		_	Canadian Copper and Sulphur (Lim.)	48.
1		***	7		573	8	3.5	Cape Copper (Limited)	9317
		***	1	***	75	6	25	Glasgow Caradon Copper Mining (Lim.).	90.
1	1		158		73	5	21	6 Ditto New	3.0
1			93	4	nil	***	nil	Huntington Copper and Sulphur (Lim)	99. 41
25	8		23s.	***	_	***	-	Babunda Mining (Limited)	1-
	4	***	4	***	_	***	-	Panuicillo Copper (Limited)	18.
1	^	***	10	***	6†	***	6†	Rio Tinto (Limited)	60.
1 2	-	***	20	***	7	***	7	Ditto, 7 per cent. Mortgage Ronda	19
10	-01		100	***	5		5	Do., 5 p.ct. Mor. Deb. (Sp.Con. Bde.)	871/
1 1	0		10	***	225	6	20	Tharsis Copper and Sulphur (Limited)	
			7	***	223	4	20	Ditto New	
		***	i	***		***	_	Yorke Peninsula Mining (Limited)	0 /0
1	ī		ĩ	***	_	***		Ditto, 15 per cent. Guaranteed Pref.	. 6s. 3d
1	•	***	-	***		•••		COID STITED	118. 00
1								GOLD, SILVER.	
1	1	•••	1	***		***		Australian Mines Investment (Limited).	. 85,
1	5	***	5	***	/s. 60	1]	78. 0		. 91/6
1								OIL.	- /4
1	0		7		6	***	15	Dalmeny Oil (Limited)	War
1 '	1	***	í	***		14		Oakbank Oil (Limited)	734
1	i	***		8	- "		0.5	Ditto	40s.
21		***				4	71	4 Unhall Mineral Oil (Limited) # 4"	
		***	10	***	- 27			Ditto "B" Deferred	. 5%
51		•••	10	***	_	***		West Calder Oll (Limited)	. 10
	0				-	***	171	Vound's Paraffin Light & Min-	408.
21	U	***	0;	%	b	***	117	4 Young's Paraffin Light & Mineral Oil(L)	. 15/ ls 3d
1								MISCELLANEOUS.	
1	0		25	***	5	***	6	London and Glasgow Engineering & Tro-	n
1 '		•••			_			Shipbuilding (Limited)	0497
	7		7	***	10		15	Phospho Guano (Limited)	
1 ,	ó				6			Scottish Wagon (Limited)	
	0	***	4	***	6	***	-	Ditto New	. 11
1 3	NT OF	100	-71	10.01	ove	liet	a of	nines and auxiliary associations are as full	. 851.
	NOT	oi-	had	Rect	ch a	OTT	nania	es only being inserted, or those in which a	as can be
8.80	Property	all	lad'	****	out od	vill	in th	event of any being emitted and matin	cotch in-
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	OLA	110	n IO	the	ther	oli-	te A	information as can be ascertained from tim	e to time
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th	a ac	m	ban)	, W.	ien n	шу	omei	particulars as full as possible.	
1	n.		25.	De	il din		Stin 1.	J. GRANT MACLEAN, Stock and Share I	sroker.
	108	2 (Thee	Bu	H GIM	4.	Stiril	ng, May 9.	

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the Mining Journal, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

WATSON BROTHERS. MINEOWNERS, STOCK AND SHARE DEALERS, &c. 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs, WATSON BROTHERS to make their Circular now published in the Mining Journal more extensively known, and

their Circular now published in the Mining Journal more extensively known, and to state—
That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Bhares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly estitement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting misses inspected for their own guidance, and will also obtain special reports of any par vicular mine for their clients, for the inspecting agent's fee of 22 2s.

Vecular mine for their clients, for the inspecting agent's fee of \$2 2s.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.B., author of "Gleanings among Mines and Mines," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messr. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedcaling than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and dvice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily saked their opinion of particular mines, as well as to recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

In next week's Mining Journal we hope to give a few "notes" on the D'Eresby Mountain and other mines from personal observa-tion, and illustrated by a plan showing the exact situation of the mines, and the run of the lodes of the district. The map from which this smaller plan has been taken has been made for us by Captain Roberts from actual surveys, as well as reference to leases and other documents, on a scale of 200 fms. to an inch, and will be published as soon as possible of this size and coloured, and notice will be given in the Journal when and where copies of it can be obtained.

in the Journal when and where copies of it can be obtained.

SATURDAY, MAY 4.—Market very quiet, and prices merely nominal. D'Eresby Mountain, 80 to 100; Van, 19 to 20; West Chiverton, 11 to 12; D'Eresby Consols, 11½ to 13½; East Van, 5½ to 5½; Leadhills, 3½ to 4½; Roman Gravels, 7½ to 8; Tankerville, 3½ to 5½; Leadhills, 3½ to 4½; Roman Gravels, 7½ to 8; Tankerville, 3½ to 5½; Mellanear, 3½ to 4½; Carn Brea, 40 to 43½; Dolooath, 29 to 31; South Condurrow, 10½ to 11½; Tincroft, 10 to 11; Agar, 3½ to 4½; Green, 10; 3½ to 6.

Monday, May 6.—Market continues very inactive. Van, 19 to 21; Great Laxey, 18 to 19; D'Eresby Mountain, 80 to 100; D'Eresby Consols, 11½ to 18½; West Chiverton, 10 to 12; Tankerville, 4 to 4½; Rockhope Lead, 17½, to 19½; South Condurrow, 10½ to 11; Tincroft, 10 to 11; Grenville, 3½ to 3½; Peevor, 6½ to 6½; Carn Brea, 40 to 42½; Dolooath, 29 to 31; Mellanear, 3½ to 4; Parys Mountain, 8s, to 10s.; Richmond, 9½ to 9½; Eberhardt, 6 to 6½; Pannicillo Copper, 12s. 6d. to 15s.

TUESDAY, MAY 7.—There is very little change in prices generally, and quotations for the most part are the same as yesterday.

WEDNEBDAY, MAY 8.—Market quiet, and the following prices almost nominal. Carn Brea, 40 to 42½; Dolooath, 29 to 31; D'Eresby Mountain, 80 to 100; D'Eresby Consols, 11 to 13; East Van, 4½ to 15; Glyn, 12s. 6d. to 15s.; Great Laxey, 18 to 20; Leadhille, 3½ to 4½; Relanear, 3½ to 4; Parys Mountain, 8t. to 10s.; Fenstruthal, 4s. to 6s.; Roman Gravels, 7½ to 8; Rockhope Lead, 17s. to 19s.; South Condurrow, 10½ to 11½; Tankerville, 4 to 4½; Eneror, 6½ to 6½; Riagstaff, 10s. to 12s. 6d.; Frontino and Bolivia, 1½ to 2½; Eberhardt, 6½ to 6½; Riagstaff, 10s. to 12s. 6d.; Frontino and Bolivia, 1½ to 2½; Restorday.

TRUEBDAY, MAY 9.—Market quiet, and prices nominal. Van, 19 to 21; D'Eresby Chonsols, 11 to 13; Sentandy, 3½ to 4½; Richmond, 9½ to 9½; Chontales, 9s. to 11s.; Eberhardt, 6½ to 6½; Riagstaff, 10s. to 12s. 6d.; Frontino and Bolivia, 1½ to 2½; Restorday. Eberhardt firmer, at 7½ to 7½.

FEIDAY, MAY 10.—Mar

0): Dolcoath, 29 to 31; South Condurrow, 11 to 11½; Grenville, 3½ to 4; Devor Consols, 2 to 2½; Mellanear, 3½ to 4; Eberhardt, 7 to 7½; Richmond

ECHOES FROM THE MINING MARKET.

ECHOES FROM THE MINING MARKET.

The situation of our markets remains unchanged. Dulness is the order of the day, and, with the exception of some of the more favoured lead stocks, quotations are for the most part nominal. Investors, however, are confidently awaiting a change for the better Investors, however, are confidently awaiting a change for the better as soon as the Eastern Question has finally been set at rest. The as soon as the Eastern Question has finally been set at rest. The appearance of the tin market has, if anything, slightly improved, as the purser of North Levant states in his last remarks on the price of the metal, as the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. Moreover, the supply then was in excess now is, the price was 9l. per ton higher. This is a decidedly endouring statement, and as Mr. Boyns rightly adds "If statistic go for any-coarging statement, and as Mr. Boyns rightly adds "If statistic go for any-coarging to the deposits of New Zealand would be exhausted before the lastitute that the find eloposits of New Zealand would be exhausted before the lastitute that the tin deposits of New Zealand would be exhausted before the presease had practical knowledge of the colonial tin fields. But to us one of the speaker had practical knowledge of the colonial tin fields. But to us one of the speaker had practical knowledge of the colonial tin fields. But to us one of the speaker had practical knowledge of the colonial tin fields. But to us one of the speaker had practical knowledge of the colonial tin fields. But to us on

BATUEDAY, MAY 4.—Chicago shares were offered at 20s., but there seem to be no buyers. Business was done in Colorado at 2½, and in Richmond at 9½. Don Pedro and South Aurora were somewhat in demand. Van shares were firmer, 20½ being bid, while East Van relapsed to 5½. Bome of the low-priced railway stocks were in demand, such as Chatham Ordinary at 22, Caledonian Deferred at 8½, and Sheffield, A, at 38. Russian, 1822, was a firm market, advancing 1½, to 72. This loan is of very moderate dimensions, and could quite recently be bought at 67.

8¾, and Sheffield, A, at 38. Russian, 1822, was a firm market, advancing 1½, to 72. This loan is of very moderate dimensions, and could quite recently be bought at 67.

Modat.—The market showed considerable firmness to-day. Egyptian Preference advanced 1¾, to 55½, and the Unified ¾, to 30¾. Shares of the Mercantile Bank of the River Plate were in considerable demand, and rose to 2¾. Several transactions also took place in Royal Aquarium, and the shares ultimately adacted to 3½, 3¾. The eighth annual meeting of the Eberhardt shareholders was held to-day, when the report was adopted. The shares closed rather better after the meeting, being 6½ to 6½. East Van fell to 5, 5¾; while Van shares were firm at 20½. Hultafall, 4 to 4½; Port Phillip, 9s. to 11s.; Panulcillo, 10s. to 15s.
Tuesday.—Eberhardt shares improved to 6¼, while business was done in Chicago at 15s.; these shares continue very flat, being quoted 10s. to 20s. Van shares were dealt in at 20½. Bast Van being neglected at 5½. Rio Tinto fetched 3, and Sierra Buttes 2. The railway market was rather disorganised by the heavy fall in Berwick and York, A. The former is expected to issue a bad traffic return to 1½. Egyptian Unified improved ¾, to 31, ex the coupon now being paid of 2½. At present the return to the investors here is nearly 20 per cent. Weddesday. East Van declined to 4½. Eberhardt had one of those sudden spurts that generally follow after a little solid buying. From being 6½ the price quickly rose to 7½, and at one time buyers offered 7½. From this there was a rapid decline, the price at the close being 7 to 7½. Don Pedro advanced to 5½, ¾; and from the number of buying orders about a further rise is not at all improbable. Egyptian Unified was again a firm market, and rose to 32, the Preference closing 56½ to 563½. In railways Brighton, A, was run up to 129, while York, A, fell 2—to 113. The Berwick traffic showed a decrease of 12,523ℓ, but the stock only closed ½ worse than yesterday.

bable. Egyptian Unines was a sericition, A, was run up to 129, while York, A, fell 22.—to 113. The Berwick traffic showed a decrease of 12,523%, but the stock only closed ½ worse than yesterday.

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Thursday.—Eberhardt Mining Company: In his report to the directors Capt. Drake does not forget to remind them that "the is fully aware that unless ore in paying quantities is soon developed somewhere the life of the company will eventually begin to have an end." He estimates that \$5000 monthly will be required for the tunnel, which on April 6 last had penetrated 2856 ft. It will strike the Eberhardt Mine when it has reached a length of about 4000 ft. The reserve fund is now understood to be about 7000%. Shares closed unchanged at 7½ to 7½. Egyptian Unified rose to 33½.

FEIDAY (Openny).—The markets are firm. Brighton, A, has reached 130, and North British is over 81. There is a good demand for Don Pedro shares at 15e, for Colorado at 2½, and for Panulcillo at 17s, 6d. West Chiverton, 10 to 12. South Condurrow, 11 to 11½. Wye Valley and West Wye Valley are both offered, and dull, also 8t. Harmon. Chicago shares are offered at 15e, and Javail at 6s.—Theo of Cock.—Business has been marked in North British at 8½, but the stock is now considerably lower. Last night it closed at 80. Eberhardt, 7½ to 7½. Rehuend, 9½ to 9½. Kapanga, ¾ to 5½. Flagstaff, ½ to ½. Metropolitan, 113½ to 113½.—District, 58½ to 58, Losedonian, 113½ to 113½.—District, 58½ to 58, Caledonian, 113½ to 113½.—Epur of Clock.—Some husiness has been done in D'Erresby Mountain at 80, but very few shares have been offered at this. Llaurwat, 2 to 2½. Van, 20 to 21. East Van, 4½ to 4½. At Birdseye Creek a profit of \$2500 is reported, after a run of 30 days. South Condurow, 11 to 11½. Chapel House Collery, 3½ to 3½. Newport Abercarn, 9½ to 3½. Supplian Unified and Russian, 1873, close

TECHNICAL EDUCATION IN JAPAN. IMPERIAL COLLEGE OF ENGINEERING.

In the Mining Journal of March 3, 1877, a detailed account of the character and progress of the Tokio-Kaisei-Gakko was published, and a few weeks afterwards another equally important Japanese institution—the Tokei-Kobu Dai-Gakko—was also referred to, and as the reports of the latter to the end of 1877 and the current calendar have now been issued, by direction of H. E. Hirobumi Ito, the Minister of Public Works, some further details may be given the Minister of Public Works, some further details may be given concerning it. The college has been established under the orders of the minister who has just been mentioned, with a view to the education of engineers for service in the Department of Public works. The curriculum extends over six years, the first two years being spent at the college; during the next two years six months of each year will be spent at the college; during the next two years six months of each year will be spent at college and six months in the practice of that particular branch which the student may elect; and the last two years will be spent wholly in practical work. The system of instruction will be partly professorial and partly tutorial, consisting in the delivery of lectures, and in directions and assistance being given to the students in their work. Admission to the coelige is obtained by competitive examination, for which all Japanese subjects who are under the age of 20, and are of sound constitution, who can produce satisfactory testimonials of good moral character are eligible. There is a preliminary examination, and the best hundred or so of the candidates are admitted to the second or entrance examination proper, which embraces translation from Japanese into English, and cice terral-writing to dictation, English grammar and composition, arithmetic, geography, geometry, and elementary algebra. The standard of admission will be raised year by year, until it reaches that of the European schools. The aim of the college is to train students in civil engineering, mechanical engineering, telegraphy, architecture, practical chemistry and metallurgy, and mining. The family architecture, practical chemistry and metallurgy, and mining. The course, the technical course, and the practical course; and, to judge from the reports, not only do the professors and staff appear to be working energetically, but the clauses appear to be progressing well.

The principal, Mr. Henry Dyer, M.A., B.S. of Glasgow, is assisted by five graduates—Mr. D the Minister of Public Works, some further details may be given concerning it. The college has been established under the orders

ports, not only do the professors and staff appear to be working energedically, but the classes appear to be progressing well.

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that the institution will confer permanent and lasting benefits upon the entire Japanese Empire. The notice of the mineral resources of Japan as shown by the collection already broughton the museum must be reserved for a future opportunity.

Original Correspondence.

THE HULTAFALL MINES, SWEDEN.

THE HULTAFALL MINES, SWEDEN.

SIR,—Press of business prevents me writing fully to you this week with regard to my visit to Sweden, but I purpose doing so next week. I may, however, say that I found the dressing-floors the most compact and perfect of their kind I have ever seen, requiring only the addition of a fine crusher and additional jiggers and buddles, the total cost of which will not exceed about 250k, and this will render the establishment capable of treating 60 tons per day: 300 tons of mineral have been carted from the mines to the dressing-floors and partially treated, showing a result of about half in dressed mineral, or 120 tons of blende and 30 tons of lead. The mines are looking wonderfully well. The lode as proved by the cross-cut in the 15 is upwards of 30 ft. in width. The shaft is down 10 fms. below the 15 fm. level. The cross-cut will at once be put out to intersect the lode, Driving in the 15 is in solid blende and lead, and the lode standing in the top, bottom, and sides. The value of the mines is undoubted. All that is wanted is a little time to prove that the parties who inspected the mines have not exaggerated the prospects.

Austinfriars, May 10. exaggerated the prospects.

Austinfriars, May 10.

FLAGSTAFF MINING COMPANY.

Sin,—I do hope the letter in last week's Journal signed "A Lawyer" was not written by a member of the profession. No greater proof could have been given of the absence of good taste greater proof could have been given of the absence of good taste and gentlemantly breeding than the way in which the writer of that letter alludes to two members of the board, whom he is pleasen to describe as a "Lion-ite" and "Strand Mapseller." The two gentlemen referred to had nothing whatever to do with the management of the affairs of the company until it drifted into its present position; they then came forward, lent their own money, and devoted day affay day of tan forward, lent their for weaks together, to the day after day, often until late at night, for weeks together, to the neglect of their own business, in the endeavour to extricate the company from the difficulties by which it was beset; and I affirm company from the difficulties by which it was beset; and I affirm of my own knowledge that they could not have shown more anxiety or worked harder had they been the sole parties interested in the result, instead of being simply the representatives of a large body of shareholders. Whether "Lawyer" is one of that disreputable class called wreckers, or is actuated by private spite or pure malice, is of little consequence; the attempt to disparage those gentlemen is simply cowardly and dastardly.

With respect to the annual meeting of shareholders, if the writer of the letter in question knows anything about public companies he must know there are certain details to be prepared for a meeting which it is not at all times possible to get ready to a day or even to a month; and I have no doubt when the meeting is held the directors will be able to satisfy the shareholders that no unavoidable delay has taken place.

with respect to the statement that "they were selling the debentures for the value of the spoilt stamps," it is a deliberate falsehood.

The directors never sold any of the debentures for the stamps; they did not the stamps; they stamps a some debentures for the stamps; they stamp a new debentures for the stamps; they stamp and the stamps. did get the stamps upon some debentures which were useless allowed as spoiled stamps, and in that they only did what every business man does who happens to have stamps which may have become useless. To state that they "were selling the debentures for the value of spoilt stamps" was simply a perversion of the truth— in other words, a wicked and deliberate attempt to deceive and

mislead.

The appeal to the shareholders for funds to relieve the company of its liabilities failed, and I believe the plan now proposed by the directors is the best that could be devised; I think the shareholders will act most unwisely if they allow a fine property to be lost without making an effort to save it, or allow themselves to be influenced by anonymous letters often written by ignorant or disappointed persons for their own purposes.

Great Winchester-st., London, May 10.

Solicitor to the Company.

THE MINING INTERESTS OF GREAT BRITAIN.

SIR.—In mining adventure, as in every other kind of speculative industry, it is essential—nay, indispensable—to observe and remember the cardinal points that create and establish the inherent elements the cardinal points that create and establish the inherent elements of expansive prosperity, and consequently the actual tests of value. Tin ores, your correspondent states, are now depressed to the lowest standard on record over a period of 40 years. Tincroft has declared no dividend since May last year, yet Dolcoath paid one of 5s. last month, upon a product of about 360 tons of black tin. The difference in price since the year 1872 shows a depreciated market value of fully 45l. a ton, equal to a quarterly dividend of 14,200l.—say, 3l. 6s. a share. Now, if the following observations of your correspondent be correct we may hope in the future to see Dolcoath improve its dividends fully 50 per cent. of this heavy falling-off in the commercial value of the product. He observes that "the improvements which have been effected in tin mining since then under the pressure of stern necessity, and those which are in progress, are such that better results could now be obtained with a price 20l. a ton less, and in some cases even 30l., than then. This is a most important element in consideration of the future This is a most important element in consideration of the future This is a most important element in consideration of the future that is too often either overlooked altogether or not assigned its due importance." It is very evident that there is no falling-off in the present yield of Dolcoath, and scarcely a sign of even remote exhaustion; hence we shall be greatly disappointed if the improvements referred to by your correspondent are not practically utilised and in full force under the able and experienced management of Capt. Josiah Thomas.

It is most satisfactory to observe Wheal Peevor in the Dividend List and likely to prove no mean rival of Dolcoath. We sincerely

It is most satisfactory to observe Wheal Peevor in the Dividend List, and likely to prove no mean rival of Dolcoath. We sincerely trust that Mr. William Ward, the spirited Stock Exchange miner, meets with continued success. Dolcoath shares are quoted 31 to 33, and Wheal Peevor 6½ to 6½, or respectively 137,472. and 19,500l. for the entirety, and both paying 5s. per share dividend quarterly. Wheal Eliza Consols declared another dividend of 30s. per share last month, making a sum of 17l. 10s. per share (18l. 10s. paid) during the past two years. It is very evident that with machine labour and practical economy there is a future for Cornish tin mining, and probably investors will do well to make a judicious selection at ruling prices, but caution is necessary, as the disparity in the market values of the two properties referred to exhibits most forcibly.

The miserable sale of 3407 tons of copper ores at Swansea (9th) at 11s. per unit of metal speaks for itself; this metal, like all other metallic products is deplorably depressed, and it is evident that the trade, manufacture, and commerce of the country must improve or mining industries will not advance. It is satisfactory to note that the Cambrian sold 116 tons of ore for 1113 5 s., or close on 9l. 12s. a

trade, manufacture, and commerce of the country must improve or mining industries will not advance. It is satisfactory to note that the Cambrian sold 116 tons of ore for 1113t. 5s., or close on 9t. 12s. a ton. This is a good beginning, and we trust to see it soon in the market again; Tan-y-Bwlch also sold 120 tons of ore for 994t. 10s. Thus we have two Welsh mines taking a respectable stand in the Swanses Ticketing sales. It is marvellous that copper mines can pay at the abnormal prices of the ores; still, we have South Caradon, West Tolgus, and Mellanear occupying respectable positions. The Messrs. Taylors must have the credit for developing and conducting the two latter mines, and it must be satisfactory to that long-established and eminent firm to possess the two foremost mines in the last Cornish ticketing list. The Wheal Friendship in Devonshire, and many of the great and most important dividend copper mines during the first four decades of the present century—as St. Austell, Gwennap, and other districts in Cornwall sprung from their enterprise, and returned thousands per cent. to the fortunate shareholders. In respect to lead mines, the price of metal is sadly affecting the dividends of the chief producing ores throughout the United Kingdom. Great Laxey has declared the usual 8s. dividend, but not the bonus of 2s. a share in addition. The directors have commenced to stock the produce: they ought to be the hat indeed still small and the stock the produce:

bonus of 2s. a share in addition. The directors have commenced to stock the produce; they ought to be the best judges, still smelters are keen and wary, and after the manner in which the tin mines of

Cornwall suffered after stocking and holding for months the market beat the miners, and smelters gained the advantage. Dolconth and Wheal Owles especially suffered in consequence of continued depreciation. Pateley Bridge looks well; 25 tons of lead is the product of last month, which at 17t, a ton gives 425t. The mine looks well. The 30 east, on Rake vein, yields 4 tons per fathom, and west 1 ton, and drains the water from the winze under the 20; here the lode is worth 2 tons per fathom. The agent expects the 30 west to well. The 30 east, on Rake vein, yields 4 tons per fathom, and west 1 ton, and drains the water from the winze under the 20; here the lode is worth 2 tons per fathom. The agent expects the 30 west to improve, and which is the deepest point westward. The stopes and pitches throughout the mine are turning out profitable quantities of ore. At 41, a share, this is unquestionably the cheapest mine in the market. This mine has been at work for 500 years with slight intermissions from time to time during periods of commercial depression and political disturbances. The works are profitable at present, the points numerous, and quickly and economically realised. A year hence this mine ought to yield 10001, per month profit. A little more energy alone is required. West Pateley Bridge and East and West Craven Moor are each promising mines, and will ultimately prove most productive and profitable. Still Pateley Bridge at 41, per share is 16,0001, only for the entirety, and is a wonder of neglect. The directors scarcely deserve so good and expansive a property. There are upwards of twenty lodes, and tens of thousands of tons of lead have been extracted from the backs of the adit and shallow deposits of ores. These lodes are wholly unwrought in depth. D'Eresby Mountain is selling at about 50,0001. The Gorse lode is still worth, it is said, 3 tons of lead and 4 tons of blende per fm., and good progress is being made with the No. 5 fm. level. Such a lode as this is reported to be from 25 fms. of ground should realise 100 tons of blende and 75 tons of lead per month, or as the lode is 30 ft. wide 2 fms. in height and 2½ fms. in length, should yield the quantity of ores named, and six to eight men ought to perform all the labour required in the extraction. This mine has been most favourably reported on by several recognised authorities, and it appears from all accounts that an extraction. This mine has been most favourably reported on by several recognised authorities, and it appears from all accounts that an extraction. This min

lative shares in the market; the profits for the past and pre-month have been 100% a day, and at a cost of 200% a month.

R. TREDINNICK, Dealer in Stocks and Shares.

[For remainder of Original Correspondence see this day's Supplement.]

MANUFACTURE OF TIN-PLATE.

The new method of manufacturing tinned plates, invented by Dr. Francesco Belluomini, consists in the substitution of refractory clay cases in the place of the cast-iron boxes hitherto employed for the annealing of the iron plates, and in use of colophony in the tinning processe in place of grease or palm oil. The iron plate during the various processes it undergoes before being tinned becomes raw and brittle and is unfit for folding; in order to remedy this defect it is annealed in closed boxes of cast-iron in particular ovens for the annealing of closed vessels. The ovens having been heated for several hours are allowed to cool, and the hermetically closed boxes are only opened and the plates removed when cold. The continual changes of temperature cause a great consumption of the cast-iron boxes; in fact, Jullien calculates on an average that there is an outlay of 1fr. 60c., or 1s. 4d., in boxes for every 100 kilogrammes of annealed iron plate, which would be equivalent to Slc., or 8\forall defects of annealed iron plate, which would be equivalent to Slc., or 8\forall defects of annealing the iron plate in closed cases made of a material which costs little, which stands fire better than cast-iron, and which effects equally useful results. The above results he has succeeded in obtaining by the adoption of refractory clay cases in the place of cas'-iron boxes for annealing the iron plates may be calculated above 50c., or 5d., per case of tinplate. The iron plates in order to become tin-plate receive a coating of tin. Pravious to the tinning process the iron plates must be iron plates. The new method of manufacturing tinned plates, invented by Dr.

plate. The iron plates in order to become tin-plate receive a coating of tin. Previous to the tinning process the iron plates must be thoroughly cleansed from oxide, and to avoid the re-formation of oxide they are kept in water until they are to be tinned. As the plates would not take on the tin coating were they plunged wet with water into the tin, they have to be dipped into a substance which removes the water, and covers them with a coating, so as to

rotect them from oxidation.

Hitherto the plates have been immersed in grease or oil previous Hitherto the plates have been immersed in grease or oil previous to being plunged into the tin pot. By this method a kilogram of grease or oil was consumed for every case of tin-plate. He has found that colophony produces the same effect, and can, therefore, be perfectly safely substituted for grease or oil. The great advantage of this discovery may be estimated by the fact that grease or oil costs from 100 fr. to 120 fr. per 100 kilograms, and that colophony costs on an average 24 fr. to 26 fr.; consequently there would be a saving of 60 c., or 6d, for every case of tin-plate. The cases for annealing the iron-plate should be made of refractory clay, should be solid, and of the same form as those of cast-iron. They should exceed in size by 15 c., or 5½ in., in length, and by 5 c., or 2 in, in breadth the iron-plates they contain. When the plates are deposited in the cases the covers should be laid on and be made tight with clay to prevent the air from penetrating. The cases are then introduced into the oven, and are heated in the usual manner. The colophony should be of ordinary quality, and having been melted then introduced into the oven, and are heated in the usual manner. The colophony should be of ordinary quality, and having been melted in ordinary pots employed for the grease it should be kept in a state of fusion. The wet iron plates should be plunged vertically one one by one into the resin pot, and be left there until the cessation of the shullition produced by the water in the colophony. They should then be removed by means of tongs, and be immersed into the tin pot. The remainder of the process should be effected in the ordinary manner.

STEEL RAILS ON THE CONTINENT.—Advices from Brussels state that the Bochilm Works, Westphalia, have obtained an order from the Royal Portuguese Railway Company for 13,000 tons of steel rails. The contract price is 6l. 12s.

Collier Ready Reckoner.—The utility of a ready reckoner for settling, if not avoiding, disputes between workmen and payclerks is well known in most places of business, but it is of course essential that the tables should be specially prepared for the particular business in which they are to be used, and that they should be readily intelligible to every man employed. So far as the payment of colliers is concerned the Colliery Ready Reckoner, prepared by Mr. JaMes Irriando, of Glasgow (and which will be forwarded from the Mining Journal office on receipt of 1s. 6d.), leaves nothing to be desired. The amount to be paid for any number of, toos and cwts. (whether the ton be taken at 20, 22½, or 24 cwts.) can be instantly ascertained for any price between 1s., increasing by 1d at a time; thus, the value of 6 tons 7 cwts. (22½ cwts. to the ton) a 2s. 5d. can be seen at a glance to be 15s. 3d., and so on with other quantities. There are also tables for the conversion of tons of 22½ cwts, and 24 cwts, into standard tons; tables showing the amount of wages for any period of time from one hour to 12 days at rates from 15s. to 50s. per week of 54, 57, and 60 hours, and tables of weights of ropes, pipes. &c., yet the whole book is but a small pamphlet of 90 pages, which can be readily carried in the pocket.

HOLLOWAT'S ONTMENT AND PILLS—RHEUMATIC AND NERVOUS PAINS.—The chilly mornings and evenings will provoke these tortures in constitutions susceptible to these maladies. Nothing affords so much relief as Holloway's sintment, well rabbed upon the skin after repeating warms fomemations. Thousands of testimonials bear witness to the wonderful comfort obtained from this safe and simple treatment, which all can adopt. Holloway's cintment, assisted by the judicious use of his pills, is especially serviceable in assuaging the sufferings from cramps and other muscular pains. The united efforts of these incomparable remedies not only release the sufferer from intolerable torments, but axpal for the sentence of the pills, is especia COLLIERY READY RECKONER.—The utility of a ready reckoner

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Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—8. Toy, May 8: The lode in the 15 driving east, by nine nen, continues of the same strong and promising character as when last reported n, and contains a little lead ore, but not sufficient to value. I am hoping we hall meet with something better soon. All other works are going on as usual. BAMPFYLDE.—J. Juleff, May 9: We are dressing up a parcel of copper ore or the Swansea market. The stopes continue to look very well, also the 112 fm. nd west of No. 4 shaft. I am pleased to hear you are getting on satisfactorily with the reconstruction of the company. I hope that you will soon be in a position to work the mine in a proper manner, and with spirit, which I firmly betwee will lead to good results. Dr. Foster, the Government Inspector of Metal fines, has been with us to-day, and went over the copper portion of these mines, and seemed very well pleased.

tion to work the mine in a proper manner, and with spirit, which I firmly believe will lead to good results. Dr. Foster, the Government Inspector of Metal Mines, has been with us to-day, and went over the copper portion of these mines, and seemed very well pleased.

BLAEN CAELAN.—J. Pell, May 8: The engine-shaft is now down 3 fms. below the 20. The winze, although down below the 30, was not properly equared up when I reported last: this is now down, and a cross-cut commenced to drive through the lode to the north wall. We are breaking very good lead, which confirms my estimate of 50%, per fm. from the 20 to the 30. The ore already broken in sinking the winze will rapidly accumulate from the driving upon the lode, and in June I hope to resume dressing without, however, touching our reserves of ore in the stopes, which the present price of lead does not seem to render wise. Our returns from sinking and driving will leave us a balance in hand in time for the first half-yearly meeting in August, which I trust will be deemed satisfactory progress. I have put men to clear out and open up the copper stope in the deep addit level west. All other work is progressing most satisfactority.

BLUE HILLS.—S. Bennetts, A. Gripe, May 4: The south or Pink lode in the 50 cast is at present not of much value, although it coutains some good tinstuff, and has a good appearance. The top lode east at the same level is worth 3%, per fathom, and west 6%, per fathom. The north lode in the 30 cast end is looking very well, altogether it is 1½ ft. wide, and worth 12% to 15%, per fathom.

BODIDRIS.—H. Hotchkins, May 1: The stopes throughout the mine are producing lead and blende, if anything better than last week. I am daily expecting to cut the Maes-y-pwill lode, when I expect a good discovery. The 46 cast is looking well, altogether it is 1½ ft. wide, and worth 12% to 15%, per fathom.

CENTRAL VAN.—James Roach, May 7: The water in the shaft continues to rise from the bottom, and smells perfectly rancid (of sulphur and lead)—a very encoura

yleiding some good saving work. The afilt cross-cut driving north is still in a good channel of ground; in the last 6 ft. driving we have cut several branches of capel, containing mundle and spots of lead. We hope to report something good here shortly.

OWMYSTWITH,—May 8: The lode in Gill's upper level driving east on the new lode has become poor for lead, but still maintains its size—2 ft. wide, and worth 1 ton of blende per fathom, with nice spots of lead embedded in the blende, and looks kindly to improve again; this we might reasonably expect, as we have lead in the winze before us. The lode in the winze sinking below Michell's level is 1 ft. wide, worth 12 outs. of lead ore per fathom; ground favourable for sinking, and good progress is being made. In Michell's cross-cut driving north the ground is very dry, and favourable for driving. The lode in the stope over Gill's upper level is 3 ft. wide, worth 1 ton of lead ore per fathom. All the other stopes throughout the mine are without material change, producing their usual quentity of lead ore. The three pitches east of Kingside shaft, on the whole, are looking better than for some time past, and the men are getting fair wages. All our machinery is in full working order, with a fair supply of water, and the dressing of ores is proceeding regularly.

DE BROKE.—J. Phillips, May 9: The lode in Wilson's engine-shaft shiking below the 45, is about 3 ft. wide, composed of killas and crystallised quartz, with good stones of lead ore, altogether improved in appearance. The 45, driving east of Wilson's, is rather hard for progress, and not yielding much ore at present, but sclosely approaching a deposit of lead ore ground going below the 35. The 35, driving on the north part of the lode, is without change as to its produce, but the ground is rather week, and difficult for progress. A new stope east of the winze below the 25 is worth about 80. per fathom. Other stopes are without alteration. Biddings for 22 tone of lead ore are due to-morrow.

D'EREBBY CONSOLS.—Wm. Be

looking profitsing to decimine to great the folde is 5 ft. wide, rich throughout for lead and blende.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, May 9: I have pleasure in stating the mine has further improved since the date of my last report.

EAST CRAYEN MQOR.—David Williams, May 9: The 42 west to get under the new shaft from surface has been extended during the month 5 fathoms, in a vein 4ft. wide, filled with gossan, spar, and lead ore; worth fully 12 wets. per fathom. The 30 west is cleared and repaired 8 fathoms west of shaft. In the 58 west Hardgate end vein is 3 ft. wide, and producing good stones of lead ore.

EAST DARREN.—May 6: In the 80, west of cross-cut, on south branch east, the lode is 5 ft. wide, at present disordered by cross-joints, now yielding 1 ton of lead ore per fathom. In the 80, east of cross-cut, on south branch west, the lode is 4 ft. wide, yielding saving work for dressing; this point is nearly through to the level under. The stopes and pitches throughout the mine, on the whole, are not looking so well. Our machinery is in good working order, drawing and dressing progressing regularly.

ELGAR.—J. G. Green, May 8: The 10 fm level east continues to steadily improve, and I would like very much to continue this drivage for (say) 10 or 12 fms. Some very nice stones of silver-lead ore were broken from the end to day. Good progress is being made in sinking the shaft. Saturday is our measuring and setting day.

EAST VAN.—Capt. Williams, May 9: I have nothing new to report this w and

progress is being made in sinking the shaft. Saturday is our measuring and setting day.

esk.

EAST VAN.—Capt. Williams, May 9: I have nothing new to report this wand Tempest shaft is down 5 fms. 2 ft. below the 55. The 55 is driven 5 fms. east ask 2 fms. 4 ft. west. From the appearance of the lode in both ends we may madiscovery any day, and I must say they indicate well for the next level.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., May 4: The lode in the 82, west of cross-out, is carried 6 ft. wide, producing mundic and spar, impregnated with copper ore. The lode in the 93 east is principally composed of arsenical and sulpar mundic, mixed with copper ore, worth 8. per fathom. The lode in the vinze and stope going down below the 105 is worth 30. per fathom. The lode in the rise and stope in the back of the 105 is worth 20. per fathom. The drivage of the 117, east of engine-shaft, is continued on the north part of the lode in good ground for progress. The tribute department is without change.

GLENROY.—R. Rowe, May 7: While fixing the plunger and enlarging the balance-bob the water rose to the 40. We have now forked it to within 6 ft. of the 60, and I expect the mine will be quite clear by Saturday, and the men resume sinking the shaft by Monday morning. Everything is now in first rate order, and we are provided with everything requisite for sinking the shaft 20 fms. GOGINAN AND LEVEL NEWYDD.—May 8: The lode in the pitch over the

order, and we are provided with everything requisite for sinking the shart 20 fms. deeper straight away.

GOGINAN AND LEVEL NEWYDD.—May 8: The lode in the pitch over the GOGINAN AND LEVEL NEWYDD.—May 8: The lode in the pitch over the 130, east and west of western shaft, is 7 ft. wide, harder than of late, and producing 13 cwts. of lead ore per fathom. The lode in the pitch below the 120 fm. level, 45 fathoms west of Bryn Pica shaft, is yielding 3 to 10 cwts. of ore per fathom. The lode in the two pitches over the 120 fm. level, 35 and 65 fathoms west of Bryn Pica shaft, is producing 12 to 14 cwts. of ore per fathom. In the pitch over the same level, 12 fathoms west of western shaft, the lode yields 14 cwts. of ore per fathom. The lode in the three pitches over the 100 varies from 4 to 8 ft. wide, and will produce on an average 11 cwts. of lead ore per fathom. The pitches, on the whole, are looking better, but the ore ground is being taken away very fast, and some of the pitches will soon be exhausted. Everything at surface is being pushed forward with full force, and machinery in good order. Fair progress is being made in the dressing department, and we shall sample 30 tons of silver-lead ore on Tuesday next the 14th instant. The water is getting low in our reservoirs, but we have some nice rain here to-day.

made in the dressing department, and we shall sample 30 tons of silver-lead ore on Tuesday next the 14th instant. The water is getting low in our reservoirs, but we have some nice rain here to-day.

GREAT DYLIFFE.—Evan Evans, May 8: Our stopes, &c., on the Dyliffe look, erall month the same as last week. The driving in the 20 is still in paying ground, and looks very promising; worth about 15 cwts. per fathom. The stope in the new lote looks levery well to-day, worth from 12 to 15 cwts. per fathom. There is no change of importance to notice in any of our stopes on Licelaweddu lode. GREAT LAXEY.—W. H. Rowe, May 8: The point of chief interest and importance at present in the deep mine is the improvement in the 220 north, which driving has been for a considerable time supproductive: the lode in the end is now unusually promising, and worth 20°, per fathom. In all probability owing to the influence of the slide, which must now be close at hand, the 235 end is not so rich for ore as it has been of late. There is very little change to notice in the stopes in roof of this level and the sole of the 220°. A new stope in the latter is worth 30°. per fathom, and improving. The other workings in this part of the mine have very little changed since our general report.—Dumbell's: The 215 driving north continues to be worth 20°, per fathom, and looking likely to improve. The 185 north is in a rich lode, and now holed to the winze sunk from the 170°. As soon as the end is a little beyond it a valuable section of ground will be immediately available for stopes. The past month's work at this point has given rather better results from the working by boring machinery, and with increased experience, and the lode has since shown a stronger and improved appearance. The 85 north hould soon be coming up with the ore in the 10° tod, but, there being no properly defined lode for a considerable distance, we shall now carefully dial the two levels, in order to prove if the main branch is, as we suspect, standing on their introduction. Ther present month. We shall sample 25 tons of silver-lead ore the end of the coming and worth 20. per fathors. In all probability owing to the core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stopes in core as it has been of late. There is very little change to notice in the stope in the latter is worth 30. per fathors, and in provides mine. The other working in this part of the mine has the provided of the 20. A new stope in the latter is worth 30. per fathors and the provided of the 20. A new stope in the latter is worth 30. per fathors and the provided of the 20. A new stope in the latter is worth 30. per fathors and the provided of the 20. A new stope in the latter is worth 30. per fathors and the provided of the 20. A new stope in the latter is worth 30. per fathors and the provided of the 20. A new stope in the latter is a great and provided in the bottom of the 80. The continues to keep the latter in a great and provided in the bottom of the 80. The continues to keep the latter in a great and provided in the solid provided in the solid provided provided in the solid provided in the solid provided provide

the best part of the lode is standing towards the south, and I have ordered the men to cut into that direction accordingly, and I hope to have to report a good lode of blende again in a few days. The lode in the stope above the 53 is also large, and will yield fully 3 tons of blende per fathom. There is about 2 ft. of water in the 57, which I am hoping will be drained by the end of this week, but I have ordered two men to commence clearing up the shaft and level on Wednesday so as to get ready to commence operations at the 57 east at once on a lode worth 3 tons of blende per fathom.

KIT HILL TUNNEL.—H. Bennett, May 9: South End: The tunnel is set to drive north by six men, at 53. 12s. per fathom; the ground is changing, the killas becoming whiter, and letting out more water. The adit on the silver lode to drive west by four men, at 24. 10s. per fathom; the lode is about 20 in. wide, of a very kindly appearance. The deep adit to drive north by two men, at 24. per fathom; there is nothing new to report at this point,—North End: The tunnel to drive south by four men, at 24. 10s. per fathom; the ground is full of small branches of iron, and letting out much water.

LADYWELL.—Capt. Waters, May 9: The winze sinking in the 16, south of engine-shaft, is worth about 1 ton of lead ore per fethom, and the lode looks very promising. The shaftmen will finish cutting plat at the adit level this week, and we loop to resume sinking the new shaft on Monday. The 20 south of this shaft is at present in a small lode, and not to value. The rise in this level south of shaft is opening out some paying tribute ground. We hope to sample 25 tons of lead ore next week.

LIVINGSTONE CONSOLS.—William Vivian, May 9: There is no change to

s at present in a small lode, and not to value. The rise in this level south of haft is opening out some paying tribute ground. We hope to sample 25 tons of ead ore next week.

LIVINGSTONE CONSOLS.—William Vivian, May 9: There is no change to

promising. The shaftmen will finish cutting plat at the sofit level this week, and we bope to resume sinking the new shat on Monday. The 29 south of this shaft is at present in a small lode, and not to value. The rise in this level south of shall so opening out some paying tribute ground. We hope to sample 25 tons of LIVINGSTONE CONSOLD.—William Vivian, May 9: There is no change to motice in the mine since last week. Engine-Shaft, We are close on the points LIVINGSTONE CONSOLD.—William Vivian, May 9: There is no change to motice in the mine since last week.

LIAM GAN.—W. Michell, May 1: 10-10; we are hopping to be subte to report a valuable discovery soon. In the 20 west no meterial change has occurred; it continues producing good stones of ore, and promising.—Wright's Shaft: In the consecution to the weith continue toget into abones of ore in the country rock, which has a subter of the continues producing good stones of ore, and promising.—Wright's Shaft: In the consecution of the weith continues to the consecution. We are drawing tributers' ore to-day, and they will commence dressing to-morrow. The dressing of slimes and halvans is being carried on regularly.

In the consecution of the continues the continues of the continues of the continues of the continues the continues of the continues the continues of the continues th

at the new bottom level. Having finished putting in the dividing plank and made everything complete to the bottom, we are now drawing the stuff with the engine from that level.

NEW BRONFLOYD.—Thos. Kemp, May 9: Setting Report: No. 3 Shaft, North Lode: The 121 end west is still continued on the north part of the lode, which is consisting of killas and spar, carrying nice ribs of lead ore; we are leaving the main part of the lode to the south of the drivage; from the appearance of the lode, which is sonsisting of killas and spar, carrying nice ribs of lead ore; we are leaving the main part of the lode to the south of the drivage; from the appearance of the lode, when it is stripped to the full width, we shall lay open excellent stoping ground; this bargain is reset to six men, at 120s. per fathom; the ground remains unchanged, being exceedingly hard for opening, consequently slow progress is made. A tribute pitch, to two men, over the 110 west of winze, for two months, at 150s, per ton; lode worth about 10 cwts, of ore per fathom.—Middle Lode: We have opened a level east in the 73, south of Cutris's orosa-cut, 2 fms. 5 ft.; the branch of ore referred to in previous reports has become poor; in looking at the position of the said cross-cut, being right under the discovery made at the 82, and as the ground has a weakly dip, it is natural enough that the ore has also gone in that direction; if so, it will be found to the west of cross-cut. For the present we have suspended operations east; the men are now employed in driving west, where the lode is composed of killas and spar, spotted with ore. I propose to drive a few fathoms in that direction, and should we not meet with anything of importance it will then be advisable to cross-cut the lode both north and south to prove the same. We have put in the stull, &c., in the 52 east of No. 2 shaft; this stope is in fair working order, which is set to 10 meu, on tribute for two months, at 5s. 10s. per ton; lode worth fully 1 ton of ore per fathom, which includes the remova

in putting in penthouse; sinking below the 36 will be commenced next week. In the 36, east of Herbert's winze, the lode has taken a more northerly bearing; its present yield is about 10 exts. of lead ore per fathom. Two new stopes have been commenced in the roof of this level, manned by 12 men. Other stopes will be commenced in the roof of this level, manned by 12 men. Other stopes will be commenced next week, when full particulars of Friday's setting will be forwarded. We have a good supply of surface water, and all being well samples of 20 tons of lead ore will be issued on Tuesday next.

PENHALLS.—B. Bennetts, P. Vian, May 4: The lode in the 70 east end is 2 ft. wile, and worth 71. per fathom, and in the same section of it west is worth 51. per fathom. The 60 east, on the top lode, has much improved; so far as can be seen of this part it is worth 122. per fathom. The 65 east, on another section of the lode, is worth 61. per fathom, and the 45 west, on the south section of the lode, is worth 64, per fathom.

PRINCE OF WALES.—J. Andrews, May 8: To driving the deep adit west of Vigar's shaft we have just passed through a small cross-course, from which we broke stones containing a little silver, but the lode in the end is small and poor.

ROMAN GRAVEES.—Arthur Waters, May 9: The 110 cross-course and the formal bottom of new engine-shaft, is driven into the lode 6 ft. We shall have to go about 6 ft. further to open ground for plat, which will prove the full width of the bottom of new engine-shaft, is driven into the lode 6 ft. We shall have to go about 6 ft. further to open ground for plat, which will prove the full width of the bottom of new engine-shaft, is driven about 38 fms.; lode in present end 7 ft. wide, worth 3½ tons per fathom. The boring-machine continues to do well here; the present price is 104, per fathom, which its about 34 tons per fathom in this level is worth 35 tons per fathom. The stopes in the back of the 50 south of the same shaft, is worth 34 tons per fathom. The stopes in the back of the 5

yields stones of tin. The 93 east is worth 8l, per fathom. The 93 west is worth 10l per fathom.

BOUTH DARREN.—Henry James, May 9: No change to notice in any of the bargains since the setting report, except that the 90 end is showing more lead. Next week we shall cut through the lode to ascertain its value. The surface work is progressing favourably.

BOUTH DE ERESHY MOUNTAIN.—T. Bennetts, May 9: The ground in the cross-cut driving from No. 1 to No. 2 lode is of much the same character as for some time past. The men are making fair progress in clearing the adit level, north of engine shaft. I hope to get it cleared by the end of this week. We have cleared up the shaft sunk on the 10 ft. lode about 3 fms. We are still finding some good lumps of lead in clearing. In No. 2 adit the No. 1 lode has very much improved during the last day or so., SOUTH ROMAN GRAVELS.—May 9: Setting Report: Shelve Deep Adit: The end to drive north on No. 1 joint, to four men, the month, at 6l, per fathom; there is no change in this end worthy of comment. The end to drive north on No. 2 branch, to four men, the month, at 6l, per fathom; there is no change in this end worthy of comment. The end to drive north on No. 2 branch, to four men, the month, at 6l, per fathom; there is no change in the month, at 6l, per fathom; their branch carries; a regular and the properties of the properties of the north on No. 2 branch, to four men, the month, at 6l, per fathom; this branch carries; a regular and the properties of the properties of the north on No. 2 branch, to four men, the month, at 6l, per fathom; this branch carries; a regular and the properties of the properties and the properties of the north on No. 2 branch, to four men, the month, at 6l, per fathom; this branch carries; a regular and the properties of the properties of the north on No. 2 branch, to four men, the month, at 6l, per fathom; this branch carries; a regular and the properties of the properties of the north on No. 2 branch, to four men, the month, at 6l, per fathom; the pro

is no change in this end worthy of comment. The end to drive north on No. 2 branch, to four men, the month, at 6, per fathom; this branch carries; a regular course, and still contains spots of ore.

"An KERYILLE.—A. Waters, May 9: Setting Report: Watson's engine shaft to sink below the 192, by nine men, at 28. per fathom. The 192 east of shaft, by four men, at 12. per fathom; lode worth 1 ewis. of lead ore fathom. The 192 west, by six men, at 13. per fathom; lode worth 1 ton per fathom. The winze sinking below the 192 east, by six men, at 14. per fathom; lode worth 1½ ton per fathom. The winze bolow the 192 west, by six men, at 14. per fathom; lode worth 1½ ton per fathom. The stope in the back of the 192 east, by four men, at 6. per fathom; lode worth 2½ tons per fathom. No. 1 stope in back of the 192 west, by four men, at 6. per fathom; lode worth 1½ ton per fathom, No. 2 stope in back of ditto, by four men, at 6. per fathom; lode worth 1½ ton per fathom. The stope in the bottom of the same level, east of Hooton's winze, by six men, at 6. per fathom; lode worth 1½ ton per fathom. The stope in the bottom of the same level, east of Hooton's winze, by six men, at 6. per fathom; lode worth 1½ ton per fathom. The stope in bottom of the 180 west, by two men, at 71. 10s. per fathom; lode worth 1½ ton per fathom. The cross-cut going north from the 152 west, by four men, at 9. los per fathom. The stope in bottom of this level, west of rise, by four men, at 6. per fathom; lode worth 1½ ton per fathom. The cross-cut going south from the 92 east, by four men, at 7. los per fathom; lode worth 1½ ton per fathom. The stope in bottom of this level, west of rise, by four men, at 9. per fathom; lode worth 1½ ton per fathom. The occasion upon south from the 92 east, by four men, at 7. los per fathom. The stope in bottom of this level, west of rise, by four men, at 9. per fathom; lode worth 1½ ton per fathom. The tope south from the 92 east, by four men, at 6. per ton. A pitch in the back of the 120 west, by two men, at 6. per t

ton. A pitch in the back of the same level, east of shaft cross-cut, by two men, at off. per ton.

TEMPLE.—May 8: The progressive improvements which have been recorded from time to time in the reports of this mine have been exceeded during the past week, and the property now presents the most cheering prospects for the future. No. 3 adit level is carrying a lode which produces at least 1 ton of very fine lead ore. No. 2 adit, immediately below, is producing fully 1½ ton of lead ore, of a similar character; and No. 1, or the deepest adit, is producing considerable quantities of blende, and from the appearance of the lode will be equally rich, if not richer, in lead as soon as it comes under the point where the lead was first cut in Nos. 2 and 3. The tramway to dressing-floors is nearly completed, and surface operations genereally progressing favourably.

TYNY-FRON.—E. Jones, May 8: In driving the adit level on the south wall of the lode, and east of the course of lead ore we discovered, we find the lode is making a curve and coming back to its usual bearing. During the week we have been opening on a very fine branch of steel-grained silver-lead ore seen in the bottom of the adit west, and under No. 1 stope. We find the course of ore continuous, with some good blende, and hope to give you the value of same next week. This looks well for the next level, and I have no doubt it will still greatly improve when opened out by it.

week. This looks well for the next level, and I have no doubt it will still greatly improve when opened out by it.

VAUGHAN.—May 8: In the deep level east the lode is chiefly composed of a light clay-slate, branches of carbonate of lime, containing spots of lead, blende, and copper, a promising looking lode. In the stope over the 30 east the lode is large, yielding 12 ewts. of lead ore per cubic fathom. The lode in the stope over the 20 east is large, yielding 10 owts. of ore per fithom. Our machinery is in good working order. Drawing and dressing steadily carried on, and shall sample on Tuesday next, the 14th inst., 20 tons of silver-lead ore.

WEST CRAYEN MOOR.—David Williams, May 9: Blackhill Adit Level: The vein here is at present 5 ft. wide, principally composed of barytes, calcapar, and good patches of lead ore. No. 3 stope in the back of level is in a vein 3 ft. wide, worth 15 cwts. of lead ore per fathom.—New East Shalt: In the 20, southeast from No. 2 vein, the vein has again improved, being at present 18 in. wide, and preducing occasional stones of ore. No. 2 stope, in the back of level, by four men; vein 3 ft. wide, worth 2½ tons of ore per fathom. In the 20 east, upon No. 3 vein, the vein is 1 ft. wide, yielding good stones of ore. On surface we are getting on well with fixing the pumping connections from the engine-house to New Blackhill shaft.

WHEAL OREBOR.—J. Andrews, May 7: The lode in the 120 east has slightly

men; vein 3 ft. wide, worth 23 tons of the per hardon.

No. 3 vein, the vein is 1ft. wide, yielding good stones of ore. On surface we are getting on well with fixing the pumping connections from the engine-house to New Blackhill shaft.

WHEAL CREBOR.—J. Andrews, May 7: The lode in the 120 east has slightly improved, and is now 4ft. wide, with a leader on the north part 6 in. wide, yielding good saving work. The lode in No. 2 stope in the back of the same level is 6 ft. wide, worth 30. per fathom. The lode in No. 2 stope in the back of the same level is 6 ft. wide, worth 30. per fathom. All other points are without change.

WEST CWMYSTWIFH.—John Davis. May 4: During this week we have broken some very good ore in Fleming lode, but we are not yet aufficiently deep to expect to find the ore in paying quantities; the point we are opening upon now looks very promising. In the deep adit we are fixing air pipes; since the rushing of the water from the old workings the air has been very damp and close here, so much so that yesterday after two or three attempts I falled to carry a lighted candle up to the place we had been clearing. The recess for the winze on No. 2 lode is completed, and we shall commence sinking on Monday. We have cleared the entrance of the northern workings, but having been closed so long the air is very foul, and I have not been in yet. After I have examined this part of the morth side of the level in the 70 west there are branches or droppers of copper or about 3 in. wide dropping into the lode, which we consider to be a good indication, as in the 60 and 50 where any dropper came into the lode it made it rish. The 70 driving south on the canner lode has improved, 2 ft. wide, good quality tinstuff. The 50 driving west, on Wilson's lode, is looking better; 3 ft. wide, producing some very rich stones of tin, and a little copper ore. The other places are just as last reported, but the stopes are not so rich as when we commenced stoping in the bottom of the 60.

WEST PATELEY BRIDGE.—D. Williams, May S:

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MAY 11. 1878.]

It is per fathom. Stope in the bottom of the 50 south, by two men, at 4. per fathom: worth ½ ton per fathom. We have reduced the number of trammers, isthom: worth ½ ton per fathom. We have reduced the number of trammers, enginemen, and dressing pare, and calculate on saving thereby 50. per month. WEST WHEAL TOLLOUS.—May 8: Since our report for the meeting on Monday we have cuit the south part of the lode in the 146 cross-cut south. We can see it 18 in. wide very good. It will take two or put one hole into it. We can see anything more of it. The lode in the 1.55 end three days to open the end to see anything more of it. The lode in the 1.55 cross set increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and is still increasing. We have cut into the lode in the 1.25 cross cut increased and the professional content of the mine. The stope under the 135 west of No. 1 winze is looking very well.

WHEAL GREBOR.—John Andrews, May 9: I am glad to inform you that the lode in the 130 east has further improved sidee Tuesday, the orey part of which is now 2t wide, and worth 8t. per fathom. All other points are without change. It is now 2t wide, and worth 8t. per fathom. The stope on the great lode, I feel persuaded that the cost, which are all dipping down on the great lode, I feel persuaded that the roll of will be found highly productive at the point of juncilon, which I think will take place in another week, knight, in a store we will be able to work in the 160 without hindreanc

in get most of the water lower in the 160 without hindrance. The 180 east end is worth 16t, per fathom. The 130 east end is worth 8t, per fathom. The 130 west end is worth 6t, per fathom. The 150 east end is worth 8t, per fathom. The 130 west end is worth 6t, per fathom. The stopes on the whole are getting the as for some time past.

WHEAL KITTY (8t. Agnes).—Stephen Davey, Richard Harris, May 4: New Shaft, Pryor's Lode: The lode in the 18d, driving west of shaft, is 2½ ft. wide, and worth for tin 7t. per fathom; the lode at this point is presenting a better appearance, and we hope soon to report an improvement. The lode in the 18d, driving east of shaft, is 3 ft. wide, and worth for tin 18d, per fathom. The lode in the 18d, driving west of shaft, is 2 ft. wide, and worth for tin 19d, driving west of shaft, is 2 ft. wide, and worth for tin 19d. per fathom. The lode in the 18d, driving west of shaft, is 2 ft. wide, and worth for tin 7t. per fathom. The lode in the 65, driving west of shaft, is 2 ft. wide, and worth for tin 7t. per fathom. The lode in the 65, driving west of shaft, is 2 ft. wide, and worth for tin 7t. per fathom. The lode in the 65, driving west of shaft, is 2 ft. wide, and worth for tin 7t. per fathom.—Old Lode: The lode in the 100, driving west of engine-shaft, is producing saving work for the stamps. In the 90, east of engine-shaft, is producing saving work for the stamps. In the 90, east of engine-shaft, is looking very promising. In driving the cross-cent north (east) of the engine-shaft we have intersected the north part of the Well lode, and as far as seen it presents a very kindly appearance; we shall as soon as it is cut through commence to drive east and west on the same, and hope to open up some gool paying ground. A cross cut is set to drive south at the 20, west of the engine-shaft, by four men, at 7t. 10s. per fm., to cut the south part of the Harrowbarrow lode. The adit level to drive west of the engine-shaft, by four men, at 7t. 10s. per fm., to cut the south part of the Harrowbarr

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, May 9: Produce for the month of April, 36,000 oits.—13,8501; yield, 59 oits, per 100=17 by oid measurement. Produce small, from large temporary admixture discussed in the same of the month of April, 36,000 oits.—13,8501; yield, 59 oits, per 100=17 by oid measurement. Produce small, from large temporary admixture do many and the same store of the month of April, 36,000 oits.—13,8501; yield, 59 oits, per 100=17 by Oil measurement. Produce small, from large temporary admixture do many and the same as for some time past; the quality, however, is not so good.

Letter from Mine Captains, dated March 31: General Remarks: The ore has been derived from the following sources:—No. 8 new shoot below additevel and No. 8 shoot, east of Bawden's crossecut, north ground; the ore has been of low and moderate quality. A little improvement is perceptible in the northern side of the state of the same and the same state of the same short of the

pasing through a very poor channel of ground, which we hope will soon improve plasing through a very poor channel of ground, which we hope will soon improve this stope is being carried on, embracing the small incline mentioned in the last report. No. 3 stope, east of Bawden's cross cut, as seen above, is in a channel of poor ground at present; the lode is small, and of low quality. The lode in No. 4 slope east is still of moderate quality, and of fair size.

Frospective and Running Work: Permanent Incline: At head of incline the bottom or lower part of the incline road made for carriage, wheels put on, axle centered and wedged tight and put on the road, and carriage, wheels put on, axle centered and wedged tight and put on the road, and carriage, wheels put on, axle centered and wedged tight and put on the road, and carriage, wheels put on, axle centered and wedged tight and put on the road, and carriage, wheels put on, axle centered and wedged tight and put on the road, and carriage nearly completed.—

New incline is close timbered to shaft, and a strong set of good quality timber put in the turn near the shaft. The level is cleared of debris, two caps which were broken badly are repaired pro tem. with tread boards, &c. Bymon's shaft is completed to Alice's, and is now undergoing repairs from thence to bottom. In No. 2 side level put in same. In the stope east of same four reprieve sets put in same. In the stope east of same four reprieve sets put in same. In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve sets put in same, In the stope east of same four reprieve east put in same, In the stope east of same four reprieve east put in same, In the stope east of same four reprieve east put in same, In the stope east of same four reprieve ea

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carriage to angle-bob. Clatern for receiving the water made; also launders for carrying same through new level ready for fixing; and other work in connection with same advancing fairly.—Reduction: A new launder 21 ft. long made and fixed in place of an old rotten one for carrying water to wash home strakes. Another, 31 ft. long, to convey water to jigger wheel in place of decayed one, and many other little jobs done too small and numerous to mark special mention.

— April 10: Extract from Captain Vivian's letter: Since my last we have taken a many other little jobs done too small and numerous to mark special mention.

— April 10: Extract from Captain Vivian's letter: Since my last we have taken a second to the contract of th

week. I examined the sine Tend dired this week from the nead to tent; it is elected a forward all obstructions, and in very good condition its whole length, and not read that the source of the sourc

granite, and is, consequently, of less value, worth 1/2 ton per fathom. The 100, east of Caros, some very good ground has been opened during the fortnight; its now disarranged by cross-joints. Campbell's winze, below the 60, is yelding more ore, and the ground is easy for sinking, valued at 1/2 ton per fm. Duke's winze, below the 60, is going down in a moderately productive lode, yielding I ton per fathom. Pablo's winze, below the 50, is being sunk in advance of the 60, west of Abercrombie's shaft; the lode is worth I ton per fathom. Los Salidos: The lode in the 145, east of Morris's, is now looking kindly; the lode consists of quartz and fine lumps of lead ore, valued at 1 ton per fathom. In the 130, east of Morris's, the lode is disordered and poor, having during the last few days been in contact with a cross course. The 120, east of Cox's, continues to open up splendid tribute ground yielding 3 tons per fathom. The 110, east of San Miguel, has fallen off in value during the past few days; at present worth 1/2 ton per fathom. In the 85, west of Palgrave's, the lode in the 80, east of Palgrave's, is compact and regular, composed of quartz and lead ore, producing 1 ton per fathom. In the 35, cast of Palgrave's, the lode is large and open, and easy for driving through; worth 1/2 ton per fathom. In Samifield's shaft below the 55 very little has been done yet. The lode in the boundary winze is small and poor, and the ground hard.

LINABES.—May 1: In the 120, east of San Tomas, the lode is very wide, with good stones of ore. The ground in the 135, south of San Tomas, is very hard. The lode in the 100, east of Warne's, is large, open, and easy, and of a very promising appearance, yielding 1 ton per fathom. The lode in the 115, east of Warne's, there is a wide, strong, and promising lode, worth 1/4 ton per fathom. The lode in the 120, west of Peill's, is compact and regular, valued at 1 ton per fathom. The lode in the lode

the 90, west of Peill's, continues very regular, producing 1 ton per fathom. In the 120, cast of Peill's, a great length of good lole is being driven through, a wined at 1120, cast of Peill's, a great length of good lole is being driven through a valued at 1 ton per fathom. The 105, east of San Francisco, in passing through a length of the per fathom. The ton of the per fathom. No. 224 winze is a new winze, sinking below the 105, and situated east of Peill's engine shaft, valued at 1 ton per fathom. The non-i quantity of ore was returned in the past month, at 1 ton per fathom. The non-i quantity of ore was returned in the past month, at 1 ton per fathom. The non-i quantity of ore was returned in the past month, at 1 ton per fathom. The non-i quantity of ore was returned in the past month, at 1 ton per fathom. The non-industry is unable to the per fathom. The control of the per fathom of the per fathom. The control of the per fathom. The control of the per fathom of the

AUSTRALIAN MINES.

AUSTRALIAN MINES.

PORT PHILLIP AND COLONIAL (Gold).—The directors have advices dated March 19: Quantity of quartz crushed on both the companies' and tributer' accounts for the four weeks ending Feb. 27 was 4900 tons; pyrites treated, 27½ tons; total gold obtained', 1680 ozs. 5 dwts. 12 grs.; receipts (including 1822; 2s. 5 d. obtained from tributers), 3708. 19s. 3d.; payments (including 678; paid for firewood and timber), 2980; 4s. 6d.; profit, 72°L. 14s. 7d., added to which was previous balance of 2038; 1.5s. 4d., making an available balance of 2737; 1.0s. 1d. The amount divided between the two companies was 1000f., the Port Phillip Company's proportion of which is 65°L. The balance carried forward was 1757c. 10s. 1d. Remittance, 600s.

SCOTTISH AUSTRALIAN.—The directors have advices from Sydney, dated March 18, with reports from the Lumbton Colliery to March 14. The sales of coal for the month of February amounted to 13,740 tons.

ENGLISH AND AUSTRALIAN (Copper).—The directors have advices from their manager, dated Port Adelaide, March 23; The stock of coals at the Port Adelaide works was 1584 tons. The smelting operations both at, Port Adelaidad at Newcastle were proceeding satisfactorily. Since date of last divices 113 tons of copper had been shipped.

VORKE PENINSULA.—The directors have advices from the committee of inspection at Adelaide, with report from the Kurilla Mine to March 21. The following are extracts from Capt. Authony's report:—Kurilla iode—"At Hall's shaft the lode is very wide. The men are making fair progress in sinking, but it is a little hadder. Present depth 49½ fms. The 45 west is driving on a well-defined wail. Distance to drive to Grainger's shaft about 10 fms. "Four men continue to stope the lode east of the hauling-shaft in the 45, where the lode is yleiding from 4 to 5 tons of 20 per cent. ore per fathom. ——Morphett's Lode: The plat at the 30 is being out, and the phitowick got ready for sinking the engine-shaft below that level. The lode in the 30 east improved after my last mont

the work on in the cross-cut. I am sorry to inform you that amother of the pamps has sprung a leak; we have patched it up for the present. These pumps would not be safe to sink with again, but would do for a standing-lift if we should have to put in a pole. The mineral in our water corrodes, and has a great effect upon the weak part of the pipes where they have been air blown in casting. We struck the cross-lood 25 ft, from shaft; it will assist our driving, but as its course is 40° acuth of east it will take us more to the south than I expected. This was not its course in the 320 ft. cross-cut. It may, however, alter.—Prospecting 5haft: Tile contractors have sunk 33 ft.—present depth, 265 ft. At 265 ft. they passed through leaders showing nice specks of gold. I think it probable that this is the same run of stone we had the gold in 320 ft. south. When holed we shall prove it at once.

HINTS TO INVESTORS.—The May number of Messre. W. J. Tallentire and Co.'s London Investment Circular contains, as usual, a large tire and Co.'s London Investment Circular contains, as usual, a large amount of information which should be carefully read by capitalists. There is a good retrospect of the stock and share markets, with opinions as to the future of various securities. Russian bonds, the Great Eastern Railway, London, Chatham, and Dover Railway, and Hungarlan bonds are each referred to; and with regard to lead mines, it is remarked that lead mining just now engages public attentions more than that of tim. Although the price of lead is only 17% per ton, the market value of the metal is more size by than that of any other, and the demand gains, whereas the supply decrease. Under such circumstances the purchase of shares in lead mines at present prices is with investors the policy of the hour. The world does not reveal prospects for investors superior to those opened up by British last mines. The Circular is altogether well worth perusal.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply te-MESSES. PELLY, BOYLE, AND CO., SWORN METAL BROKERS, ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON. (ESTABLISHED 1849.)

METAL	MARKET-LONDON, MAY 10, 1878.
Inon. 2 s. d. 2 s. d. 3 s. d.	TIN. E s. 0, E s. 0 English, ingot, t.o.b \$5 0 0 • 65 10 0 "bars", 66 0 0 - 66 10 0 Australian 60 15 0 - 61 0 0 Banca 50 10 0 - (norm.) Biraits 60 15 0 - 61 0 0 COPPER, Tough cake and ingot. 67 0 0 - Sheets selected 68 0 0 - Sheets and sheathing 71 0 0 - Flat Bottoms 78 0 0 -
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QUICKSILVER.

Flasks of 78 bs., ware. 7 0 0 - Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 16 0 0 - 16 10 0 Black per ton 12 0 0 - 23 10 0 Black per ton 18 per ton 16 0 0 - 16 10 0 Dlack per ton 12 0 0 Black per ton 16 0 0 - 16 10 0 Dlack per ton 12 0 0 Dlack per ton 16 0 0 - 16 10 0 Dlack per ton 12 0 0 Dlack per ton 16 0 0 - 16 10 0 Dlack per ton 16 0 0 - 16 10 0 Dlack per ton 16 0 0 - 16 10 0 Dlack per ton 16 0 Dlack per ton 16

adopt. These who can make a profit should certainly take it, for the demand is vary unreliable, and may further diminish.

The spring demand is drawing to a close, and the summer months are usually dull and unpromising, and there is nothing at the present moment that can be advanced in favour of an immediate revival. There are few who imagine that the legitimate demand will take any sudden turn to enable them to realise enhanced prices, nevertheless there seems to be some sort of latent feeling that possibly a speculation might spring up upon the some sort of latent feeling that possibly a speculation might spring up upon the announcement of a Congress, or upon any other favourable political intelligence; and it is the possession of this idea that rather deters many from selling; but this surely is a very weak and siender foundation upon which to build their hopes. In the first place, there would be nothing definite in the mere announcement of a Congress beyond the fact of the meeting, and that might prove as great a failure as the Conference at Constantinople, or of ignations is journey from Constantinople to St. Petersburg, upon which so much importance to Schouvaloff's journey from Contantinople to St. Petersburg, upon which so much importance to Schouvaloff's journey from London? Besides, a speculative demand is always of the wildest and most questionable character; and, further than this, speculators are less sanguine than formerly, for their deep impressions of bought experience are not yet effaced, neither are they so powerful. The market will be chiefly guided by the determination of producers. The market have been oranmed by them to such an excess that they are completely overdone. Will the proprietors and mining companies pursue the same suicidal course or moderate supplies? They can see plainly enough the effect that has been produced, and the disastrous consequences that have followed; but for all that they may prefer tog on at the same rate for some time, in the hope that has been produced, and the

others in our market, and whose course undoubtedly influences if not governs general prices, shows no amendment but a slightly easier tendency, and common English bars have been sold this week

at a reduction of 2s. 6d. per ton. This is quite in accordance with our expectations, and, as expressed in our previous report, the market has been merely temporarily elevated on account of some little additional demand for special sizes which gave full employment for a short time to the small mills, and upon which makers raised their quotations from 5. 12s. 6d. to 5l. 15s. free on board in London; but we then remarked that it would be difficult to sustain the rise. Business continues in such a feeble state that it is perfectly useless yet awhile to build up hopes of getting higher prices; and however strange it may sound and hard to make sellers balieve, yet we are thoroughly convinced that their greatest security and interest lie jin the continuance of cheap rates for a season; they should turn their attention more to effecting economy in production and manufacture than to attempt to enhance prices; the former would help to develope trade and lessen competition, whereas the latter would check the limited demand that exists, and give more favorable opportunities of sale to foreign houses. Before the preservation of prices should be taken jinto account the preservation of the trade should be considered, for the strongest resolution would fall to command the commerce of the world. There are certain periods which occasionally arise from different causes when sellers have no control over the markets whatever; and the present is certainly one of those periods when all control on the part of the sellers is entirely lost, and having been forfeited, who is to say when it will be, if it, ever is, regained. Once get a trade disorganised, it is no easy matter to re-establish it. As yet there is no new system inaugurated between masters and men to work harmoniously together for the future and to mutual advantage, and until a just and satisfactory arrangement is subscribed to there is no hope for the iron trade of this country. Equitable terms on both sides would ensure a durable peace; and surely there has been enough los

members of a trade, whether they are the working members or the ruling members it matters not, sill should consent to abide by a reorganised sliding scale that were agreed to and adhered to, the trade would be protected from one of its principal drawbacks.

The monotonous state of the trade does not confine itself to any one particular district, but all are alike sharing more or less in the great distress which is so apparent throughout the whole kingdom. From nowhere is real activity reported, although in some slight animation has been observable. The demand does not improve, business being much restricted through merchants limits being too low in the state of any importance being observable for any particular branch of the trade. It is also good to state of any importance being observable for any particular branch of the trade. And alongsish condition. Orders which are given out appear to be merely such as are required for immediate delivery, other orders being particularly slack. Nothing worthy of much note is reported from the Rotherham district, although at one or two of the works nearly full time is being employed, while others, if not wholly idle, are very imperfectly employed, the trade being as dull, and the distress as apparent, as it ever has been. The Ickies Works are said to be in a more active condition, the output of hoops being large, and showing improvement of the state of the state

Decrease
Total decrease for 1878

Imperts of Middlesberough pig-iron into Grangemouth:—
For the week ending May 5, 1877
For the week ending May 4, 1878 Decrease
Total increase for 1878
FURNACES. In blast May 5, 1877..... In blast May 4, 1878......

TIN.—A fair demand has existed at about former prices. have been one or two futile efforts to advance the price, but they have not succeeded, and the market after undergoing slight variahave not succeeded, and the market after undergoing slight variation leaves off about where it started from. According to the Board of Trade Returns, the imports for the four months of this year amount to 123,871 cwts., against 97,085 cwts. in 1877; and the exports are 37,811 cwts., against 93,478 owts. in 1877. The market report of the 6th ult. from Penang states that purchases have been effected at 65%. 16s. and 65%. 1ds. per ton, and of stocks in the bazaar 8000 plculs. At Batavia on March 28 the price of Billiton was quoted 41 dl per plcul. At New York on April 24 the market was reported weak, and very dull. Banca quoted 17% c.; Straits and Malacca, 14% to 14%; and Australian, 14% c.

TIN-PLATES.—Our market is steady, but quiet. Plates, however, are said to be in fair request in the New York market. Sales of coke at 5 c. currency, and charcoal terne, \$5.50; charcoal tin, \$5.75 to \$6.12\frac{1}{2}\$; coke, \$5.12\frac{1}{2}\$ to \$5.50.

SPELTER.—This metal is very dull—easier in price. The imports for the first four months of the year are 104,010 cwts., against 75,200 cwts. in 1877; and the exports are 49,134 cwts., against 33,517 cwts. last year.

LEAD continues flat. Imports 32,216 tons, against 31,464 tons in 1877; exports, 11,546 tons, against 11,963 tons the previous year. QUICKSILVER.—Slightly diminished imports and exports for the year; price unchanged

THE IRON TRADE.—(Griffithe's Weekly Report).—Friday evening, he Glasgow market continues weak. G.M.B. warrants close to day 49s. 8d., buyers. The Glasgow market continues weak. G.M.B. warrants close to day 48s. 5d., buyers. We quote Imakers' No. 1 iron—Gartsherrie, 55s.; Coltness, 61s. 5d.; Calder, 58s.; Langloan, 58s. 5d.; Bummerlee, 57s.; Moniland, 50s. 6d., f.o.b. Glasgow; Glengaenock, 58s. 5d.; Eglinton, 50s. 6d., f.o.b. Ardrossan; Shotts, 59s. 5d., f.o.b. Leith; Kenniel, 54s. 5d.; Eglinton, 50s. 6d., f.o.b. Ardrossan; Shotts, 59s. 5d., f.o.b. Leith; Kenniel, 54s. 5d.; Eglinton, 50s. 6d., f.o.b. Ardrossan; Shotts, 59s. 6d., f.o.b. Leith; Kenniel, 54s. 6d., f.o.b. Bo'ness. The iron trade has experienced but little change since we last wrote. On the whole the trade looks, and certainly is, a little better. Both Middlesborough and Scotch pigs are no doubt a little weaker, with a slight loss in value, but the trade, as a whole, in manufactured iron is better all round. Although boiler plates continue flat, exceptional activity in this department may be discovered at large concerns which could be mentioned. Most of the sheet mills in Staffordshire are in full work, in many instances on galvanising sheets. There is a fair demand also for sheet-irou for pressing and stamping purposes. The makers of marked Staffordshire bars are doing a moderate business at 8d. 10s. and 9d. 2s. 6d. for the Earl of Dudley's. The leading North Staffordshire houses are doing a moderate business at 8d. 10s. and 9d. 2s. 6d. for the Earl of Dudley's. The leading North Staffordshire houses are doing a moderate business at 8d. 10s. and 9d. 2s. 6d. for the Earl of Dudley's. The leading North Staffordshire houses are doing a moderate business at 8d. 10s. and 9d. 2s. 6d. for the Earl of Dudley's. The leading North Staffordshire houses are doing a moderate business at 8d. 10s. and 10s. The North Staffordshire house have also had some of the best orders for plates given out since Quarter day. In the raw material the markets in all districts must be reported weak, and business very limited this week.

The condition of the plate trade has been the subject of several meetings lately wit

by week losing a large sum of money by the sales of I C coke plates at 14s. 6d. to 15s. per box, less carriage to port and discount.

Our market for metals is now more depressed than ever. Tin is about 60l. to 60l. 10s. for Straits and Australian; this is lower than it has been for some years. Copper is lower now than it has been for 30 years. Spelter is about 18l. 5s.; this metal has been bolstered up for a long time, but, in sympsthy with copper and tin, spelter must now have a great fall. The aggregate stock of spelter in hand at London, Hull, and Grimsby on May 1 was 1833 tons. At the same date last year the total was 1249 tons, and this was 142 tons more than was returned for the corresponding time in 1876. With these stocks, and the present state of the trade, spelter must come down.

responding time in 1876. With these stocks, and the present state of the trade, spelter must come down.

Mr. James Alferd Bayley—Alfarman and the present state of the trade, spelter must come down.

Mr. James Alferd Bayley—Alfarman and the present state of the trade, a certain amount of business is doing, but at prices absolutely ruinous to makers. New works have been started in various parts of the country, and the great competition is forcing some of these and second-class manufacturers to makers. New works have been started in various parts of the country, and the great competition is forcing some of these and second-class manufacturers to live of the present of the country, and the great competition is forcing some of these and second-class manufacturers to great compiler to the constant of the present of the country and the great compiler of the constant of the country in t

change to notice in prices, but some brands are rather firmer. — LEAD, SPELTER and ZINC are all easier.

Messrs. BROOKER, DORE and CO.—IRON: The market for Scotch pigs closed flat to day, warrants being quoted at 495. 5\(\frac{1}{2}\)d. — FINISHED IRON; As we anticipated the quarterly meetings of last month passed off without any changes of importance to record. It cannot be said that trade has much improved since, for from Wales and the North the same reports continue to come of paculty of orders and keen competition for the business that is offering, but in Staffordshire there already pervades a more hopeful feeling, and it seems to be the general opinion that a good demand may be looked for directly the fears as to impending war are set at rest. — BALDMIN'S SHEET RON; Messrs. Baldwin report that orders are coming in freely, and that their works are on full time. This is no doubt attributable to the excellence and uniformity of their quality of iron. — TIN-PLATES: A meeting of the trade was held last month, having for its object an arrangment as to curtailment of production. No agreement was, however, come to. Some of the leading houses naturally object to assist small and unsound concerns to cont nue their existence, and as sooner or later some of them must succomb to the present state of things, they argue that it is best to let matters take their course. The trade is overdone, and will not improve until there are fewer competitors in the field. GALVANISED IRON: Demand continues fairly active, and the Blackwall Galvanised fron Company are fully employed at prices that show no reduction during the month. ——LEAD: The market is still dull, and shows a further decline of about 5s. during the month.

Messrs. Fay, JAMES, and Co.—The tendency of everything during the last fort.

5s. during the month.

Messrs. Fry, James, and Co.—The tendency of everything during the last fortnight has been to increased heaviness. — Copper has been selling very slowly,
and prices have become weaker generally by from 10s. to 20s. per ton. — Ison is
without material change for manufactured, but pig is again lower. — This has
continued flat and drooping, the fall since our last having been about 20s. a ton. —
LEAD maintains its position fairly, but is without life. — SPELTER is quoted slightly
lower. — Thy-Plates have not been relieved by the proposed reduction of make,
and are very depressed in prices.

and are very depressed in prices.

Messrs. Grenfell and Rickards—Copper is still tending downwards, and \$1/, is the nearest quotation for Chili bars. There is a large consumption going on, exports being in excess of last year; but supplies are plentiful, and no one purchases any kind of copper except what is necessary for immediate requirements.

—Tin is very low, Australian and Straits being obtainable at 60/. 18s. per ton. Stocks are large. As Cornish miners do not appear willing to give up the contest with Australian producers without a further struggle, we can anticipate for the present no falling off in the output of our English mines.—Lead is quiet.

There is no particular change in the MINING SHARE MARKET this veek, and our prices remain merely nominal

week, and our prices remain merely nominal.

Tin shares are very dull, and scarcely a transaction has taken place during the week. Carn Brea has been flat at 40, sellers. At New Cook's Kitchen a new copper lode has been discovered, valued at 20% per fathom. Cook's Kitchen, 1\(^8\) to 1\(^8\); Dolcoath, 29 to 31; South Condurrow, 11 to 11\(^4\); Tincroft, 10 to 12; West Frances, 2\(^4\) to 3; Wheal Agar, 3\(^3\) to 4\(^4\); Wheal Genville a shade firmer, at 3\(^4\) to 4; Wheal Kitty (St. Agnes), 1\(^4\) to 1\(^4\); Wheal Peevor firm at 6\(^4\) to 6\(^3\). South Francis, 1\(^4\) to 2; the mine is paying cost. East Pool, 8\(^4\) to 9; Wheal Uny, 15s. to 25s.; West Godolphin, 1 to 1\(^4\). COPPER MINES have also been very flat; in most cases at a reduction. Devon Great Consols nominally at 2 to 2\(^4\); Mellanear, 3\(^4\) to 4; Parys Mountain, 8s. to 10s.; South Caradon receded to 55, 65; West Seton, 12 to 14. West Tolgus, 59 to 61, ex dividend of 30s. per share declared on Monday last. The accounts showed a profit of 1198% for the two months, the balance carried to the next account being 188%. The boring machinery is rapidly progressing towards completion.

being 18861. The boring machinery is rapidly progressing towards completion.

In Lead Mines a large business has been done in D'Eresby Mountain shares, at 80 to 100. The mine continues to look well. The great Gorse lode has been cut 50 fms. further north, rich for lead and blende. D'Eresby Consols, 11 to 13; Court Grange, 1 to 1½; Aberdaunant, 5s. to 10s.; East Van receded to 4½, 4¾; Glenroy, 15s. to 17s. 6d.; Glyn, 12s. 6d. to 15s., and in demand; Great Laxey, 18 to 19; Grogwinion, 3 to 3½; Herodsfoot, 6 to 7½ Leadhills, 3½ to 4½; Lianrwst, 2 to 2½, and largely dealt in. Minera, 16 to 18; the directors have just declared a dividend of 2s. 6d. per share. Pandora, 15s. to 20s.; Roman Gravels, 7½ to 8; Rookhope Lead, 17s. to 19s.; Tankerville firm and scarce at 4 to 4½, buyers; Tyn-y-fron, 1½ to 1½; Van firmer, 19½ to 20½; West Chiverton, 10 to 12; Wye Valley, 1½ to 2; West Wye Valley, 2½ to 3½. North Laxey, 3s. to 5s.; the lode in the 84 south continues to improve. Temple, 4 to 4½; during the past week the mine has materially improved. No. 2 adlt is worth 1½ ton to the fathom, and No. 3 adit 1 ton to the fathom. Red Rock, 2 to 2½; Saint Harmon, 2½ to 3½; Mawston, 55 to 60; West Pateley Bridge, 2 to 2½.

South Darren, 38s. to 42s.; the 90 end is becoming more productive; the other points continue rich. West Tankerville, 10s. to 15s.; a drift above the 75 is worth 2 tons per fm., and the other drivages and stopes continue about the same value as before, Reductions are made which will make the costs 500, per month less.

In Foreign Mines Chontales are firm at 10s., buyers; Don Pedro North del Rey, also in demand at 15s. to 20s.; Eberhardt have risen to 7. 74: Flavateff 12s. 6d. to 15s.; Frontine and Bolivia, 1½ to 2; completion.

In FOREIGN MINES Chontales are firm at 10s., buyers; Don Fedro North del Rey, also in demand at 15s. to 20s.; Eberhardt have risen to 7, 7\frac{1}{2}; Flagstaff, 12s. 6d. to 15s.; Frontino and Bolivia, 1\frac{3}{2} to 2; New Zealand Kapanga, 7s. 6d. to 12s. 6d.; Last Chance, 1 to 1\frac{1}{2}; New Quebrada, 1\frac{1}{2} to 1\frac{3}{2}; Panulcillo Copper largely dealt in at 12s. 6d. to 15s.; Port Phillip, 10s. to 12s.; Richmond, 9\frac{3}{2} to 9\frac{5}{2}; Senta Barbara, 25s. to 30s.; Blue Tent, 3 to 3\frac{1}{2}.

The Market for Mine Shares on the Stock Exchange has shown absolutely no improvement, notwitstanding the great improvement in some other securities during the week; prospects, however, are brightening, and mining cannot fail to feel the benefit of the change

ment in some other securities during the week; prospecte, and ever, are brightening, and mining cannot fail to feel the benefit of the change.

The prodigality of the Bible monarchs and their subjects in the use of the precious metals has given rise to almost interminable discussions as to whence this enormous wealth was obtained, and in the course of these some of the most extraordinary and ludricous speculations as to the locality of Ophir have been made, but the researches of Captain Burton and his party appear likely to throw some light upon the subject, and if the priest whose daughter Moses married occupied relatively as high a position as the heads of modern churches it may be assumed that the Midianitish woman represented something more than beauty in the Mosale domestic circle. From the Times notice of to-day of the Land of Midian and its Mines it appears that the expedition, which returned to Sucz on April 20 after travelling more than 2500 miles in four months, and encountering almost innumerable difficulties, brough home some 25 tons of geological specimens to illustrate the general geological formation of the land; six cases of colorado and negro ore, ethnological and an antipropological collections, and so on, as well as maps and plans of the whole country, including 52 ruined cities, some of whose names can be restored by consulting Strabo and Ptolemy, besides sketches of many ateliers, where perambulating bands like the gypsies of ancient and modern times seem to have carried on simple mining operations. It is not unlikely that Arabla at no distant date will become a field for a part of the British mining capitalist, for among the specimens brought by Captain Burton's party are argentiferous and cupriferous ores from on three manded to the Bedouins. There are, moreover, three great sulphur bods, the northern and the southern, belonging to the secondary formation (now invaded by the southern, and companies the brimstone, and there are two large natural salt lakes. The whole

of the second of alabaster, Ptolemy), an Bat, as the Ibe able to ut worked for i have been it are mere "s as much as left an enow with the ten coveries com of Egypt shit own child The Dev tion as rej Saturday had not th remain un "that the the 13th

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of the secondary formation supplies fine gypsum, and in parts of it are quarries of slabsier, which served to build the ruins of Maghair, Sheéayb, Madiama (of slabsier, which served to build the ruins of Maghair, Sheéayb, Madiama (of slabsier, which served the supplies of the supplies

seemen, and a reser team me somans, and an this island, they seemen remainder to future enterprises. The discovery is in knowing this the sense of 250 and quarter or another. Who shall say that the Treasury enteries continue again overflow like its own river, and feed many others besides of 250 and 150 and 15 own children? The Devon Great Consols affair remains much in the same posi-

(Friday afternoon) writes that the weekly report from the manager had not yet arrived.

Colorado United, 2½ to 3½; the circular recently issued to the shareholders states that the superintendent, in his report for the month ended March 31, says:—"We have realised this month, by sale of 145½ tons of mineral from the Terrible and Brown Mines, a total of \$18,797.97." During the night of March 12 the men in the Union Tunnel ent into a good lode of mineral about 7 in. solidore, the actual lode measuring a good foot in width. 568 ft. from the first timber. The lode is withen decident the Terrible proper. Mr. Morgan concludes his report by saying the mise is looking better than ever, and he feels sure that they will realise a larger sum this month (April) than they have any previous month. In a letter of subsupered the superintendent advises that on April 3 the seventh level was completed to the silver ore shaft, and on the 4th both workings were opened to the heading of the Union Tunnel, and adds:—"The vein is looking very well. I shall still once put up a tender to run 100 ft. west on the llode. We shall here have amagnificent stope in reserve. The recent assay of first class Terrible ore laws assays to the ton. The offices of the company at the mines, where all the business is transacted, is well arranged. A telephone instrument connects with the company per ore house, nearly an eighth of a mile away. During about its of the aumner months the mill will be ruu entirely by hydraulio power, the company is nearly 200 menum, 25 cos. It is expected to have the mill completed and in full running order by Jane 1, when the company is recond-class, 320; third-class, 55; and common, 25 cos. It is expected to have the mill completed and in full running order by Jane 1, when the company is nearly 200 men, and nearly 312,000 monthly is pidd as ages.

The latest advices from the Bonanza Line district state that "it

The latest advices from the Bonanza Aine district state that "it 15 not at all unlikely that we shall soon see Savage, an old fa-rourite, come again to the front, as the indications are now excellent for the development of a large and valuable deposit of ore to the eastward, in the 1000 ft. level a clay wall has been unexpectedly eastward. in the 1000 ft. level a clay wall has been unexpectedly encountered 3 ft. thick, passing through which the whole face of the cross-cut was soon in low grade ore. The ore in the face presents a most promising appearance, being a black sulphuret in white quartz, of the true Comstock character. Assays of ore from the face run from a few dollars up to \$100 and over. From where the ore was first stuck to the face of the cross-cut, short as is the distance, a marked improvement is to be seen in the quality of the ore. Henceforward the old Savage Mine seems most likely to be an object of interest among mining adventurers. The Combination shaft is down 2060 ft., and is now the deepest vertical shaft is the United States. It is intended to sink it vertically to a depth of 3000 ft., at which point it is expected to interest the Comstock lode. This will make it as deep as the deepest vertical shaft in the world. When the shaft shall have stained adepth greater than the lowest level of the Savage and Hale and Norcoss a drift will be run from it to draw off any water there may be in those false. This connection will be of great value in many ways, particularly in resilisting the lower levels, thus allowing a new departure to be taken from them stalling the connection will be of great value in many ways, particularly in vestigating the lower levels, thus allowing a new departure to be taken from them stalling the connection of the saverness of the whole

to the mine from New York, as confirmed by telegram already published. A practical miner had been engaged to act under the instructions of Mr. Adley. An arrangement had been made with Mr. Davis that all receipts of ore sales, &c., were to be paid to the credit of the company's account, and that on all divisions of profits the company was always to hold a sufficient sum in reserve to meet working expenses before making such division. He concludes his letter thus—"I am happy to say that our affairs here look exceedingly well, and that our position is highly satisfactory." The directors have this day received a telegram from the Chairman at the mines—"Struck rich ore, machinery arrived, and in course of erection."

Hultafall, 3½ to 4; two of the directors have this week returned from a visit to the company's mines, and express themselves pleased at the appearance of the mines, and the way in which the dressing machinery has been erected.

from a visit to the company's mines, and express themselves pleased at the appearance of the mines, and the way in which the dressing machinery has been erected.

The market for Hydraulic or Gold Washing shares has been steady. The accounts from the various mines represented on this side are considered satisfactory. Blue Tont, 3 to \$\frac{2}{3}\$; a telegram to hand during the week fannounces a further partial clean-up, resulting in a return of \$5500. The supply of water through the company's canal is so large that the agent finds it impossible to make a thorough clean up without losing the water. Hence the last two advised have been partial. Birdseye Creek, \$\frac{1}{2}\$; the agent telegraphs result of washing for April—a profit of \$2500. Steady returns will, no doubt, be made during the remainder of the season.

Lead Mines have been without material change, although more business has been transacted, the enquiry being principally for low-priced shares. Van, 20 to 21; there is no particular change reported from this mine, which continues to look well, the ends, if anything, showing a shade better than reported last week. Grogwinion, 3 to 3½; the parcel of 150 tons of ore cold this week realised 10.8s, per ton. All going on well at the mine. Wyo Yalley, 1½ to 2½; a parcel of lead has been sampled for all the mine. Wyo Yalley, 1½ to 2½; a parcel of lead has been sampled for some week. Mine looking very well. West Wye Valley, 2½ to 3½; this nine continues to open out satisfactorily, and particularly in the deep workings. Red Rock, 2 to 2½; the tottom levels are improving steadily in productiveness. South Cwmystwith, to 4; good progress making at all points. Caron, 2½ to 3½; this nine continues to open out satisfactorily, and particularly in the deep workings. Red Rock, 2 to 2½; the vide of the parcel of ore just soli has given general satisfaction, and thaces have entered the mine are solid to the same and the continues to look well—in act, the mine is presenting an encouraging appearance. West Pateley, 3 to 3½; t

COLLIERIES.—The market for these shares remains quiet, and without change, but its tone is favourable, and prices are in most COLLIERIES.—The market for these shares remains quiet, and without change, but its tone is favourable, and prices are in most cases firm; in fact, they are just in that condition at present that any marked improvement in the coal or iron trades would put them up at once. Generally speaking the reports from all the coal and iron centres are favourable, and in no respect more so than in the items of shipment, which for last week are about 20,000 tons in excess of those for the previous week. The Midland Company, which last year carried over 2½ million tons of coal over their railway, continues to take large quantities from Derbyshire to London and the South, while the returns from all the other lines is satisfactory, particularly those of the Manchester and Sheffield Company, which is carrying large tonnages of coal and coke from South Yorkshire. Steam coals show an improvement, but house coals are somewhat dull In most districts. A very large proportion of the steam and shipping coal trade is being done in South Wales, where the shippers have numerous orders on hand, especially for the Mediter, ranean depôts, which promise to be very large customers. An increased trade is being carried on in anthracite coal, the advantage in the use of which is becoming every day more appurent. The increased use for steam purposes, and its special adaptability for steel and high-lass iron production, ensures it a ready sale, and we hear of some Swansea firms having very large orders on hand for this class of fuel. The agents at Swansea for the Yniscedwyn Company are full of orders, and report that no difficulty exists in the disposal at very good prices of all the output the production of the company, therefore, has excellent prospects.

At the recent general meeting of the Iron and Steel Institute some very remarkable figures were given as to the use and rapid destruction of wooden railway sleepers, and it certainly seems probable that iron sleepers will soon supersede the old fashioned wooden ones. The enormously increased dem

The General Banking Company, of which Mr. Albert Grant is to be the chairman and managing director, has been registered with a capital of 300,000L, to be divided into 29,000 shares of 10L each, and 1000 founders' shares of 1L each, for the purpose of carrying on the business of bankers, capitalists, and monetary agents.

A petition has been presented to the High Court of Justice for the winding up of the Ellwood Green Colliery and Brick Company.

The directors of the Scottish Australian Investment Company (Limited) report a profit of 29,2711. for the past half-year. After paying interest on debentures and dividend on preference stock, there remains 18,9001., inclusive of 16591. brought forward, and out of this the directors propose to pay the usual dividend at the rate of 10 per cent., carrying forward 39001.

DENBIGHSHIRE CONSOLIDATED,-Important improvements are taking place at this mine.

With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: The Tin Mines of Tasmania (F. D. Wickham); New Mexico—No. II. (F. M. F. Cazln); NewQuebrada Company (W. W. Bird, R. Lorimer, J. H. Ritchie); New Quebrada Company (W. W. Bird, R. Lorimer, J. H. Ritchie); New Quebrada Company (C. Boundy); Mining in the East—No. XXX.: Don Pedro Gold Mine; Don Pedro North del Rey (Gold), (J. S. Houston); Richmond Mine; Combaratin and Knap Down Mine; Paracomb Silver-Lead Mine (R. J. Rutter); Mining in Cardiganshire—Tyn-y-fron Mine (A. Williams); Lead Mines in the North—West | Pateley Lead Mining Company; &c. (J. E. Harrild); Devon Great Consols; Devon Consols—Tyelve-Months Pay-Days; Devon Great Consols and the Five-weeks Month: The Five-weeks Month; Reminiscences—No. III.; New; Method to Prevent | Overwinding | G. Soott; Registration of New Companies; Patent Matters—Meetings of National Provincial Bank of England, Rio Tinto, Eberhardt and Aurora, United Mexican, Newport Abercarn, Mining Association, Levant, and West Tolgus Companies. With this week's Journal a SUPPLEMENTAL SHEET is given

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SLATE QUARRY IN NORTH WALES, most advantageously situated, adjoining railway and river. Long lease; moderate royalty; no dead rent. Powerful engine and machinery for slab making; all approved quality. A FEW SHARES STILL UNALLOTTED. quality. A FEW SHARES STILL UNALLOTTED. For particulars apply "Secretary," 11 and 12, Bury street, St. Mary Axe, London, E.C., where every information will be given, and engineers' reports can be seen.

at all greater depths.

Last Chance, 1 to 1½; Mr. Adley (April 20) advises that the whole of the machinery, including engines, boilers, pumps, and all necessary gear for pumping and winding, had been bought and forwarded

TOCK EXCHANGE AND PARIS BOURSE.—A firm with extensive connections in London and Paris, are willing to DIVIDE COMMISSIONS with gentlemen introducing orders for the Stock Exchange or Bourse. Apply in first instance, "Brokers," care of Rudolf Mosse's Advertising Agency, 1, Old Change, Cheapside, London.

ZINC ORES.

ARMAND FALLIZE INGENIEUR-OIVIL, A LIEGE (BELGIUM),

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COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY. DISTRICT UNDER THE CHARGE OF THOMAS CADMAN, Esq., H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 8th day of July next, and CANDIDATES INTENDING TO PRESENT THEMSELVES at such Examination must, on or before the 24th day of Julie, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
J. T. THOMAS, Secretary,
Winnals Hill, Coleford.

N.B.—Persons who do not reside within the District are equally examination with those who do.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF THOMAS WYNNE, Esq., H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District, at the following address:—Newcastle-under-Lyme, By order of the Board.

By order of the Board.

JOSEPH KNIGHT, Secretary.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

Notices to Correspondents.

** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

INFORTANT NOTICE—REDUCTION OF POSTAGE ON THE "MINING JOURNAL."—It consequence of the new POSTAL CONVENTION, which came into operation or July 1, the postage of the Mining Journal to many countries will be reduced to one fourth. Henceforth the subscription will be 1l. 10s. 4d. per annum (39 frs.) postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded;—Austria, France, Belgium, Denmark (including Iceland and the Farce Islands), Egypt, Germany, Gibraitar, Greece, Heligoland Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Bweden, Switzerland, United States, Maka Turkey, Morocco, Tunis, and the Canary Islands. Spain II. 19s. (50 frs.)

The Supplementark Sheet.—We have received occasional complaints, and of

Turkey, Morocco, Tunis, and the Ganary Islands. Spain it. 198. (60 178.)
THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

the country bookseller or their London agent.

Received,—"L. W. M." (Reigate)—"T. T." (York)—"R. T. C." (Exeter)—"R. (Hail Columbia)—"A Cousin Jack" (Kit Hill Tunnel)—"W. W." (Brighte—Chas. Bawden (St. Day)—"H. B. R." (Southend)—"H. P." (Almada a Tirito): We invariably decline the responsibility of answering such questio Apply to the broker through whom the shares were purchased.

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the Mining Journal to the world by the states of \$8.50, sould not apply in advance by sent post free, at the price of \$8 50c. gold per annum, payable in advance, by remit-ting to Mr. D. Van Nostrand, publisher, and importer of scientific book 2 &c., Murray-street, New York; or, direct to our Office, 26 Fleet-street, E.C.

THE MINING JOURNAL

Bailway and Commercial Gazette.

"LONDON, MAY 11, 1878.

COAL MINING LEGISLATION.

In no branch of trade from the earliest times has there been more legislation than with respect to the working of coal in this country, and even now it is trammelled more by Acts of Parliament than any other. Owners of mines are not considered sufficiently alive to their own interest, or capable of looking after the safety of their property, so that the power of Parliament has to be frequently invoked to pass laws having for their object the safe working of mines, and the preservation of mining property from injury or destruction. Ages ago, no doubt legislation might have been necessary when mining was in its infancy, and few persons knew much In no branchof trade from the earliest times has there been more sary when mining was in its infancy, and few persons knew much about it; but now it is different, for those who have the management of our collieries are men of great experience and high scientific attainments, and, of course, nust know a vast deal more about tific attainments, and, of course, must know a vast deal more about the best means of working mines than the Members of Parliament who assume the responsibility of making Acts of Parliament for their guidance. That in so doing they often fail in accomplishing what they desire is only what might be expected, so that the result of modern legislation has been to increase the cost of getting coal, advance the price to the consumer, and hamper the trade generally. The history of coal mining, however, is a most singular one, full of changes and vicissitudes, of Parliamentary patronage at one time and of opposition at another, and this may be said to have continued up to the present time. The first direct notice of coal we have is in a charter granted by King Henney the Third in 1292 to the freemen of Newcastle-on-Tyne, giving them the privilege of the freemen of Newcastle-on-Tyne, giving them the privilege of digging for coal, and in MATTHEW PRIOR'S History of the Period, published in 1245, he alludes to "carbo maris," or seaborne coal, the sinking of pits, and the wages paid to the miners. At this time an extensive trade was done with London from the Tyne. time an extensive trade was done with London from the Tyne. Shortly after, however, an impression became general that the smoke from the coal contaminated the air, rendering it injurious to the public health. A statement on a par with some of those made in more recent years with respect the working of coal. To preserve the health of the public, which it was alleged had suffered by the use of coal, in 1306 the Lords and Commons in Parliament assembled restitioned the first Enwarp on the subject and he issued a procles. use of coal, in 1306 the Lords and Commons in Parliament assembled petitioned the first Edward on the subject, and he issued a proclamation forbidding the use of coal, and ordering the destruction of furnaces and kilns of all who should persist in using it. Evidently not much notice was taken of this proclamation, for in 1326 a petition to Parliament was presented praying for payment of 10s, for sea coal used at the palace, and ordered by the clerk of the palace, but which had not been paid for. Early in the 15th century legislation with respect to coal again took place by the imposition of a tax of 2s, per chaldron on sea coal. Pits were now opened out, not only in England but in Scotland as well, and in 1564 the Scotland Queen Marky prohibited the exportation of coal from that country. Only in England out in Scotland as wen, and the transfer of the Equen Mark prohibited the expertation of coal from that country, under pain of "tinsell and conviscation." Again in 1597 James the Sixth, before he attained the English Throne, passed a law ordaining that the bodies of those should be taken care of who would "take great coal out of the kingdom." It was also provided by the same Act that if the colliers left their masters without their consent, they would be "esteemed, report, and houlden of themselves of course for leaving such maisters." The latter had also received to lay hold of all vagabonds and sturdy beggars, and compel power to lay hold of all vagabonds and sturdy beggars, and compel them to work in the pits. to my hord of wagasones and entity beggars, and comper tem to work in the pits.

During the reign of Queen ELIZABETH the trade in coal was in a

flourishing state, and was an important source of revenue, and continued to be so during the reign of several succeeding monarchs. In Charles the First's time that monarch heavily taxed coal, and it CHARLES the First's time that modered nearly taxed coal, and it became a serious monopoly. After the capture of Newcastle by the Scottish army the House of Commons undertook the regulation of the coal trade, so that we are told supplies were shipped into the Port of London for the use of the poor, coal having previously risen to the price of 4s, per chaldron. After that we hear very little of coal until the year 1661, when the Parliament of CHARLES the SECOND took cognisance of colliers, and the high wages that they were receiving to that the compact of the property was receiving. were receiving, so that to some extent we have another illustration of the fact that "history repeats itself." By the Act alluded to the rate of wages was fixed, which was "all the six days in the week,"

and as their not working constantly was a "great offence to God, and to the prejudice of the masters," any breach was to be punished by fines or other punishments "in their bodies." Coal at this time was in general use, although there was still some prejudice against it; and there are records of persons having notices to quit their houses for using it instead of wood, and STOWE tells us that in one case a large party declined an invitation to the house of one of our case a large party declined an invitation to the house of one of our noblemen because he used coal. At this time there were more than 200 keels employed in the coal trade on the Tyne, and in 1655 the number had increased to 320, and in 1699 to 1400. From May 1, 1670, to June 24, 1677, a tax of 2s. a chaldron was laid on coal for the purpose of St. Paul's Cathedral, in London. After the great fire of London the Lord Mayor was granted an impost of 1s. per chaldron for rebuilding the City, which was further increased to 3s., which terminated in 1687, for the purpose of building 50 new charches, so that many of the old churches now in the Metropolis were erected from the taxes levied on coal. During the war with France the tax was as high as 9s, 4d. per chaldron, and is now 1s. 1d. per ton, but will expire in 1889. In 1842 an Act was passed by which females were not allowed to work in mines, and then came the Bill of 1850, which introduced us to Inspectors of Mines. This was followed by the Acts of 1855 and 1860, culminating in that of 1872, by far the most stringent of all. Such is a brief history of mining legislation up to the present time, yet our working miners, or those that represent them, are not satisfied, and now desire another measure, which if passed would cause coal mining to be far more expensive than it now is, the operations of colliery owners far more pensive than it now is, the operations of colliery owners far more confined and crippled, whilst the price of coal itself would be greatly

COAL AND IRON IN GERMANY.

COAL AND IRON IN GERMANY.

Official returns which have just been compiled show that the aggregate production of coal in Germany in 1877 amounted to 48,337,950 tons, as compared with 49,588,050 tons in 1876. The quantity of pig-iron made in Germany in 1877 was 1,566,600 tons, as compared with 1,614,700 tons in 1876. The past twelve months thus formed rather a dull and unprogressive period in the industrial annals of the German empire, but there was nothing surprising in this, seeing that 1877 was a season of stagnation and depression for Europe, and even for the world at large. The production of German pig-iron is still not very heavy, but it is impossible not to be struck with the really imposing magnitude of the figures relating to German coal mining. Not only is the production of Westphalian coal now effected upon a very considerable scale, but the statistics relating to German coal mining are also swollen by the acquisition of the Sarr German coal mining are also swollen by the acquisition of the Saar-bruck collieries by Germany through the course which public events took during the Franco-German war of 1870 and 1871. The Germans have succeeded at present better than could, perhaps, have been anticipated in reconciling a vast Cosarism with the requirements of industry. The genius of Prince BISMARCK has not only called a industry. The genius of Prince BISMARCK has not only cancer a powerful and a united Germany into existence—that is, a Germany powerful and united from a political and military point of view—but it has also succeeded at present in accomplishing this result but it has also succeeded at present in accomplishing the progress of the but it has also succeeded at present in accomplishing this result without at the same time destroying the industrial progress of the nation. This is due to the fact that the military system of Germany has been essentially defensive, and not offensive, since the resolute will of BISMARCK and the military talent of Von MOLTKE laid low the proud schemes of French ambition in 1870 and 1871. It is true that in 1864 and 1866 the Germans assumed something like an offensive military policy, having successively attacked the Danes in the former year and the Austrians in the latter. But since Prince BISMARCK concluded peace with M. Thiers and M. Jules Favre in February, 1871, it cannot be said that he has carried on war for war's sake. The strength of Germany may have been somewhat exhausted by great military and naval preparations, and the "bloated armaments" policy of Prince BISMARCK may be a source of future danger to the German empire. But we must give everyone his due, and we must acknowledge that if the Government of the Emperor William is a Government of force, it is force which has thus far been prudently and even beneficently exerted.

which has a Government of rore, it is force which has thus far been prudently and even beneficently exerted.

The German soldier, when the toils of a campaign are over, is like the old Roman who at once beat his sword into a plough share. If the rural labourer of Germany goes from the battle field to the plough the German miner also goes back to the mine, and in spite of the troubled condition of Europe all through 1877 German coal mining industry was certainly presented during the var with mining industry was certainly prosecuted during the year with commendable vigour. We can but congratulate the Germans upon this result. It is all very well to shout about the Rhine, the Rhine, the German Rhine, to sing mighty choruses about the Fatherland, the German knne, to sing mighty coordises about the Fatherland, and to follow with docility the commanding genius of a BISMARCK; but sober prosperous industry is, after all, the real basis of a nation's strength. During the last 50 years great numbers of Germans have been compelled to emigrate to the United States, as they have found it next to impossible to obtain even a bare subsistence in their old haunt. A vigorous development of German coal mining and German manufacturing industry might have the effect of arresting this exedus, and under any circumstances it can sepresly fail to this exodus; and, under any circumstances, it can scarcely fail to add to the strength of the German empire.

STEEL IRONSTONE.

Owing to the rapidly increasing demand for Bessemer steel, nothing can be of greater importance than a full and accurate knowledge of the qualities of ironstone best adapted for making into pig suitable for conversion into steel. Of late we have been informed on the highest authority that Cleveland ore and the pig made from it can be so treated as to clear it of phosphorus, and then transformed into Bessemer steel. But makers of the latter at the present time prefer having hematites that they know will suit their purpose without risk of failure, and are willing to wait until it has been clearly shown that the ordinary carbonates can be cleared of all imwithout risk of failure, and are willing to wait until it has been clearly shown that the ordinary carbonates can be cleared of all impurities and made into good steel at a less cost than the stone now used. Those who are engaged in making pig of a special character for conversion into steel by the Bessemer process should be thoroughly acquainted with the conditions under which is produced that class of iron which the French term "chanal," which contains from l½ to 2½ per cent, of silicon. It is, therefore, essential that they should know the actual qualities of different sorts of hematite, for the stones of different districts and countries vary a great deal, seeing that they are often obtained in different formations. In the early history of iron making in this country there is very little doubt but what the ores were of the hematite class of the mountain limestone, and no great distance from the surface. The finest field of hematits we have and are now working is that of Cumberland; these deposits occur in the lower Silurian, but are larger and purer in the mountain limestone, where they are found as flat deposits. following more or less the dip, whilst they also appear as veins filling irregular hollows. The ores of Laucashire are of a similar filling irregular hollows. The ores of Lancashire are of a similar character, and these two counties produce more than two-thirds of all the hematite ore raised in the kingdom. The question then arises as to how long these two counties will be able to supply us even at the present rate of about 2,400,000 tons a year, and what is the area of the field. The stone in them is not the same as in Cleve land, Northamptonshire, and other counties, for long ages ago, when land, Northamptonshire, and other counties, for long ages ago, when vast volcanic force formed gigantic gorges in which large streams and strong currents flowed, numerous fissures were afterwards filled with oxides of iron mixed with barytes and manganese, and it is in this limestone formation that the hematites are found. But it is evident that we must be fast eating into the stocks of the two great counties, for we find that whilst in 1855 they only produced 537,600 tons of stone, last year the quantity would be about 2,400,000 tons. At the present time our make of Bessemer must be at the rate of about 800,600 tons a year, and the quantity is rapidly increasing, and will continue to do so, therefore it is necessary that our iron-masters should be in a position to know where their future supplies masters should be in a position to know where their future supplies of ore are to be obtained from, whilst price is an element that cannot be overlooked. It is true that for years to come we may be able to depend a good deal upon the supplies from Spain, Algeria, and some other countries, but the cost is a serious item as compared with what the stone can be purchased for at home. That our own

resources are far below what we require is patent, but this has on been the case during the last few years, for we find that the quantity of iron ore imported into the United Kingdom during 186 must 56,689 tons, whilst in 1877 it was 1,140,434 tons. The estimate

object tons, whilst in 1877 it was 1,140,434 tons. The estimated value of the ore imported last year was about 21s. Per ton, whilst the cost of the Cumberland hematite is about 15s. Per ton, whilst with many others, however, we do not believe that there is any substantial ground why our imports should be so heavy and costly as they are. Hematite has been found in many counties in but England and Wales, but has not been worked, although one would suppose that the time has arrived when the storehouses of this rale, although one should be made known, their local as the contract of the storehouses of this rale. England and Wales, but has not been worked, although one would suppose that the time has arrived when the storehouses of this ralgable ore should be made known—their locale as well as their extent. The question undoubtedly is one of national importance as to the future of the iron and steel trades of this country. We do know that in many counties there are considerable deposits of hematites that are only very partially worked. In Devon and Cornwall in the granitic schists or transition rocks there is the valuable white carbonate or spathose, as well as the red and brown hematites, but the quantity raised in those counties is comparatively trifling, although they yield about 60 per cent. of metallic iron. The upper part of the great Perran lode it is well known consists chiefly of brown hematite, caused by the decomposition of the spathose ore which is met with before the sea level is reached. This great iron lode averages about 30 feet in width for a course of several miles, and underlies from 3 to 4 feet in a fathom. At Yealmton, in Devon, there is limestone with hematite, ochre, and jasper, but our knowledge of these deposits is very limited. Somersetshire also contains large quantities of good stone, and has to some extent been worked at Ashton, near Bristol, some of it giving as much as 63:03 per cent. of iron. More recently, however, hematite has been found at no great distance from Exeter on the Bristol and Exeter Railway, but very few persons we believe are aware of this fact. Gloucestershire is another county in which ore was far more extensively found than it is at the present time and in the Forest of Dean the hematics at the present time and in the Forest of Dean the hematics at the present time and in the Forest of Dean the hematics at the present time and in the Forest of Dean the hematics and the present time and in the Forest of Dean the hematics and the present time and in the Forest of Dean the hematics and the present time and in the Forest of Dean the hematics. few persons we believe are aware of this fact. Gloucestershire is another county in which ore was far more extensively found than it is at the present time, and in the Forest of Dean the brown hematile accompanies the carboniferous limestone, which nearly encircles the entire coal field. In South Wales hematite is worked to a moderate extent, the quantity raised being at the rate of less than 100,000 tons a year, although there is every reason to believe that a great deal more could be worked were the stone opened out. We have been shown fine hematite in several parts of North Wales, for it is found not only in connection with the limestone but in the clay s'ates as well in Carnarvonshire and Merionethshire. In Ireland there is well in Carnaryonshire and Merionethshire. In Ireland there is a large field of hematite ironstone, which has not yet been defined, but no doubt it will be developed more fully than it has been, seeing that there are so many markets for it. In all these large and important fields of steel ironstone to which we have drawn attention our astual knowledge as to their extent and the probable qualities they contain is very limited indeed, and now that Bessemer is increasing in such damand not only for rails but for other nursees as well. well in Carnaryonshire and Merionethshire. In Ireland in such demand, not only for rails but for other purposes as well, it would be a great boon indeed to all persons connected with the iron and steel trades were the information we have specified given in a reliable and simple form.

THE PARIS EXHIBITION OF 1878.

Following the ample article in last week's Journal, we intend to publish a series of original papers upon the Paris Exhibition, for which purpose we have secured the assistance of two representatives, who are well known to the public as being eminent in scientific, literary, and mining attainments. We believe, therefore, we shall be able to place before the public a series of notices which will give a complete and accurate account of the Exhibition and its con-

tents, so far as the same may be admissable in the Journal.

It has been considered on all hands that the opening of the Ex-It has been considered on all hands that the opening of the Exhibition on May I was, in point of ceremony, a complete failure, occasioned more or less by the severe inclemency of the weather on that day; but this can in no way interfere with or affect the general and ultimate success of the Exhibition itself. It is, however, much to be regretted that some portion of the building, and its internal arrangements, are in such a backward state of completion; and we are strongly of opinion that it would have been a considerable advantage to all parties concerned if the opening of the Exhibition had been deferred until next year. Such an arrangement would have given ample time for the perfection of the building, and prevented inconvenience to exhibitors. We think this opinion is justified when we find that even the Parisians themselves were not prepared by the date of the opening ceremony, notwithstanding the great advantage which they possessed over foreigners, some of whom, especially the British section, are in a far more advanced state. Consequent upon the incomplete condition of the building, and some of its internal arrangements, we considered it better to defer the commencement of our descriptive articles until the Extinction. defer the commencement of our descriptive articles until the Exhibition was in a more satisfactory condition. We do not think the public will suffer in consequence of this delay. In next week's Journal, or as soon as possible, we shall commence with a brief description of the building itself, to be followed by the exhibits. We hope to illustrate some of the articles.

New CUMBERLAND COLLIERY.—The Moresby Coal Company have made an extensive winning of coal in the neighbourhood of Walk Mill, West Cumberland, and they are now making arrangements to sink a shaft. It is interesting to find in Cumberland, although trade is as bad as it well can be, that the vast colliery district is being is as bad as it well can be, that the vast colliery district is being greatly developed, and that with a new era of trade a marked increase in tappage current. rease in tonnage output would be seen.

DEEP SINKING IN AMERICA.—The Chollar-Norcross-Savage Combination Shaft is going down about 3\frac{1}{2} ft. per day, which, taking into consideration the size of the shaft, is more than the usual rate of progress. It is now down 2114 ft. perpendicularly. The flow of water is now about 23,000 gallons per day. This shaft is now 469 ft. below the level of the Sutro tunnel, to which depth it has been sunk without a pump, all the water encountered being hoisted in the skeet along with the loose rock.

CHILIAN COMMERCE.—We are indebted to Mr. W. A. WALKER, CHILIAN COMMERCE.—We are indebted to Mr. W. A. WALKER, of San Francisco de Limache, for an interesting table of statistics which, although not directly bearing upon mining, will be useful to many who take an interest in the commerce of the country, as showing whence and in what articles, he says, "we may look for competition in our foreign trade." The total imports for 1877 into Valparaiso were of the value of 1,705,4261.; of this England figures for 618,2001.; France, 342,3251.; United States, 145,5201.; rest of Europe, 246,7101.; other states of South America, 326,0691.; and Asia, 26,6321. As to the articles imported the value of cotton of all kinds was—from England, 422,7001.; France, 25,906; United States, 59,9731.; and rest of Europe, 45,8841. In woolen goods England contributed only 33,2955. out of 170,7971, the chief supply being decontributed only 33,295*l*. out of 170,797*l*. the chief supply being derived from France and the rest of Europe. Tea, 58,820*l*., is all imported via England. England sends 15,113*l*. worth of beer out of 22,153*l*., but as compared with 1876 the decline has been 54 per cent. owing to the better quality of beer brewed in Chili. The import of wine has diminished 52 per cent. from the same cause. The value of iron, bar, ralls, &c., was 30,342*l*., all from England, the increase being 15½ per cent.; of galvanised sheets, &c., all from England, 27,844*l*., the increase being 35½ per cent. The nails were chiefly obtained from the United States, who sent 16,760*l*. worth out of 24,538*l*. worth; the value of those sent from England being 644*l*. The depreciation of silver threw the Chilian authorities into difficulties by compelling them to pay in gold several millions extra sinterest due on their English loan, whilst their income was accruing in silver. This reduction of their receipts—or, as it appeared to the uninitiated, extra expenditure—they attempted to provide for by augmented import dues, which in the result yielded a diminished income owing to a falling off of the consumption of those articles on which the altered dues revealed was because. augmented import dues, which in the result yielded a diminished income owing to a falling off of the consumption of those articles on which the altered dues pressed most heavily. Mr. Walker remarks that they are now about doing what they should have done at first—preparing a draft on an income tax which it is expected will pass through Congress in June or July, and become law during the present year. Much useless disturbance of the commerce of the

REPOR

May 9. ase I fear That this traders in ago with now bring few years the prices low level. notwithst stocks her than they and for he of the lat low as 24. are fairly are the be and price well as h the dema A large Dudley, a leaders the ance of a would accommend accommen

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country, caused by this tampering with an established tariff, might have been avoided had the income tax been resolved upon as soon as a persistent lowering of the exchanges had given the Chilians notice of what was to have been expected.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

May 9.—I am unable to report any improvement in trade. And until the Eastern Question is nearer a settlement than is now the until the Eastern Question is nearer a settlement than is now the seas I fear I shall not be in a position to notify an improvement. That this is the great barrier to a revival is the conviction of most that this is the great barrier to a revival is the conviction of most that this is the great barrier to a revival is the conviction of most that the season of the contrary, have they more to do. The large number of concerns the contrary, have they more to do. The large number of concerns now bringing minerals to bank, as compared with the number some few years ago make orders increasingly difficult to get, and keep few years ago make orders increasingly difficult to get, and keep few years ago make orders increasingly difficult to get, and keep few years ago make orders increasingly difficult to get, and keep few years ago make orders increasingly difficult to get, and keep few years ago make orders at his dual. The demand is small, and low which standing that only about 45 furnaces are now in blast still not with standing that only about 45 furnaces are now in blast still stocks here and there remain heavy. Prices are somewhat firmer stocks here and there remain heavy. Prices are somewhat firmer than they were. For cold blast all mine 5t, per ton is demanded, and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply and for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful supply ditto file few few few lambded for hot blast ditto 4t. At 3t.17s. 6d., however, a plentiful s

was discussed at some length.

The iron market at Middlesborough, on Tuesday, was fairly attended. Business was, however, very restricted, and prices irregular, as there is a transition towards lower rates gradually in progress, To-day iron could in some instances be bought at 6d, per

ton less than last Tuesday. The leading rate for No. 3 does not exceed 39s. to 39s. 3d., less commission, and we have heard of sales at 6d. per ton less. Forge iron is 48s. 3d. to 48s. 6d., less commission. The hopes of those engaged in the trade are that peace may be brought about. The shipments of pig-iron from the Tees have scarcely been equal to the average within the past week. The stock returns show that there has been a decrease in the make of pig-iron through the blowing out of furnaces, amounting for last month to 11,604 tons, and there was also a decrease in the make of hematite and other kinds of iron of 1253 tons. The difference in the length of the months will account for some portion of this lessened make. There are 79 furnaces in blast, which produced of Cleveland pig-iron 136,807 tons; of hematite and other iron the make was 27,8507 tons, of hematite and other iron the make was 27,8507 tons, of hematite and other iron the make was 27,8507 tons. In warrant stores there were 72,140 tons, and in makers' stores 50,108 tons. The stocks in both these stores increased by 15,795 tons, which to a large extent counter trade remains in a quiet state. Prices are badly maintained at the rates given last week. Ship-plates are 6l. 5s.; commeno bars, 5l. 10s.; angles, 5l. 15s.; boiler plates, 7l. 5s. The iron shipbuilders have not been fully employed, but orders for new vessels are reported scare. The bar manufacturers are no better off for work. There has been some enquiries for railway chairs. The prices of second coke are weeker, and also several classes of coals.

was a S. and 25. de. at the uniform. The unit and forgot and a second of for their orders come in with their depth englastive, and the second of the second

REPORT FROM DERBYSHIRE AND YORKSHIRE.

May 9.—Since last notice there has been little change with respect to mining operations either at the lead or coal mines. The quantity of lead ore raised is still very moderate, and there have been no new ventures for some time past. One or two companies, however, have been extending operations and laying out money, which it is to be hoped will turn out profitable investments. The collieries have been working fairly considering the season, and the Midland Company bas taken a full average tonnage of house coal to the Metropolis during the week, but prices are still high, an advantage which goes to the merchant alone. Steam coal has been in rather better request, but rates as yet have not advanced, as they usually do when the active part of the year for shipments arrives. Should war be averted, then there is very little doubt but what there will be a brisk trade to the Baltic from the Humber ports; but, on the other hand, an outbreak of war would have the effect of entirely stopping the shipments during the present year. A good many men are still unemployed and on strike, whilst at Bck-inkton two pits are about to be stopped until such time as there has been a marked improvement in the trade. This will affect between 500 and 600 hands. There has been nothing new with respect to pig or manufactured iron, there boing the same number of furnaces in blast in the county as there has been for a considerable time past. Mill material is still quiet, whilst the foundries are going along tolerably well.

The Sheffield trade is still very dull, and there are very few branches indeed that can be said to be in a healthy state. One of the exceptions is that of Bessmer steel, the houses engaged in which appear to be as active as ever, for whilst rails have in no way declined there is rather more doing in alwes, tires, and other forgings. Makers of cast steel are very quiet, the demand for cutlery and general purposes having fallen off, although some orders are in hand for special qualities

when the Baltic is open takes a large quantity of coal from the West Riding. For other descriptions of coal there has been no change in the business doing.

As yet no clue has been obtained as to the perpetrator of the outrage on Mr. Kitchen, the underground viewer of the Dronfield Silkstone Colliery Company, although a reward of 50l. has been offered. It will be recollected that whilst Mr. Kitchen and his wife were in bed on the night of the 25th ult., a pistol was fired through the chamber window, the shot baving passed only a few inches above the bed-clothes. The general belief is that there is only one person concerned in the outrage, and hence the difficulty of obtaining a clue. The directors of the Parkgate Iron Company, whose works are near Rotherham, have issued a report showing the result of the 14th year's operations. After writing off the usual 2000l. for depreciation on plant, and providing for all other charges, the profit made during the year was 5016l. 9s. 6d., which, added to 627l. 16s. 1d., brought forward, made 5644l. 5s. 7d. available for dividend. The directors recommend a dividend of 1l. 12s. 6d. per share (100l. shares, 65l. paid), which will absorb 4858l. 15s., leaving 785l. 10s. 7d. to be carried forward. The reserve fund on rails has been transferred to the general reserve fund, which now stands at 11,684l. 6s. The depression in the iron trade remains unabated, and only two out of the six blast-furnaces are in operation. The directors have again reduced their remuneration for the past year by 500l. The company has not paid a dividend for two years.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

May 9.—A ray of hope, or rather an act of faith, in connection with the iron trade of North Wales is found in the fact that another furnace is to be put in blast at the Frwdd Ironworks, near Wrexham. A collier met his death at the colliery belonging to these works last week while holing, through a fall of coal. The Plas Kynaston Colliery, Ruabon, which usually is flush with orders, shares the depression of the times. Latterly the men have been working only about half-time. The various fire-brick and sanitary ware works are doing a fair trade; indeed, this may now be said to be the staple trade of the Ruabon district, especially the sanitary department. Many of the collieries between Wrexham and Flint have now brickworks attached to them. The brickworks proper, on Buckley Mountain—that mountain of fire-clay—are in good work, and the neighbourhood is making good social and architectural progress.

There is nothing of importance to refer to in connection with lead mines this week, and in the absence of news from the northern, I would just refer to the opening out of some new slate quarries in the southern half of the Principality. The new line of railway from Whitland Junction, on the Great Western Railway, which has re-

and Son, of London and Abbotskerswell, cyder, perry, and vinegar. In art, Mr. Sherlock, of Budleigh Sallerton, forwards photographs; Mr. J. H. St. Aubyn designs of the additions to St. Michsel's Mount, made under his superintendence; Mr. S. Trevail drawings of board schools; and Mr. Harry Hems a statue in alabaster and a richly carved oaken coffer. Mr. Henry Greenway, of Plymouth, surgeon, forwards a model hospital.

Another attempt is being made to utilise the immense deposits of peat on Dartmoor by converting them into a compressed fuel. Several ventures have been made, but hitherto without success, and many years ago the prisons on Dartmoor were occupied as a factory for the distillation of peat products. As a rule, the cost of manufacture and of transit has been too heavy, and the demand too small. The present works will be on a large scale, in the vicinity of Bridestowe, on the western side of the moor. The area of the sett is extensive, and the quantity of peat enormous. As a new industry we wish it every success, but there will, no doubt, be some uphill work. The warning given to owners of mines to send in their returns to the Inspector by the proper date was not operative in all cases, though it appeared in this column as well as officially. Last week Messrs. Sims Brothers, of Tavistock, were fixed 5\textit{L}, and costs for not sending in a return from Newton St. Cyres; and this week Dr.

Foster brought the Exford Iron Ore Company before the Dulverton metally in the southern half of the Principality. The new line of railway from the Great Western Railway, which has recently send the surface and in their returns to the surface, of fair quality. This quarry is to be worked more extensively as a private enterprise. Another quarry was opened some time back, further E.N.E. on this state run, from which above 100,000 slates have been made. This quarry—the Elwyn Valley—is also to be worked as a private enterprise. Operations are now in progress for its connection with the railway, a mile off, by a tramway, wh

upper portion of the beds. The Clog Quarry, further north along the same railway, has been in work for many years, but it has only recently had railway communication. Its slates are of a deeper blue colour. The slates from all these quarries will now find their way into the open market.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

May 9.—In these days of trade depression it is always satisfactory to allude to instances of fresh enterprise in connection with the staple industries. A few days ago an important step towards the future development of the mineral wealth of the district was taken by the Great Western Railway Company. Lady, wife of Sir Daniel, Gooch, Chairman of the company, has just cut the first sod of the two new collieries near Maesteg. The large property acquired by the company will be worked by them for the purpose of supplying their engines with the Rhondda steam coal, so justly valued. As a commencement, about 1000 acres are to be worked, and the sinking of two pits is to be immediately begun. In the course of a few years, it is anticipated that some 2000 or 3000 miners will be employed, and quite a new district will be opened up. Messrs. Kenrick and Phelps are the contractors for sinking the pits. After the inaugural ceremony, luncheon was partaken of by the company.

The Powell's Llanwit Collieries leasehold mineral property have been offered by Messrs. Graham and Son for sale by auction at Cardiff under an order of Vice-Chancellor Bacon. The collieries are situated at Llantrissant and Llantwit Vardre. The property remains unsold. May 9.- In these days of trade depression it is always satisfac

mains unsold.

Summonses have been taken out against a number of workmen who are on strike at the Blaenelydach Colliery for intimidating men who are now employed there. The men working at the Milfraen Pit, Waenavon, near Brynmawr, have refused to accept a reduction, and were expected to bring up their tools yesterday.

The iron trade has but little altered since last report. There is

still a disinclination on the part of buyers to give out orders beyond immediate requirements, and many orders which do come to hand are almost, if not quite, unremunerative. Clearances have been fairly are almost, if not quite, unremunerative. Clearances have been fairly good during the past week, and have been mainly to India, Norway, New Brunswick, and Spain. The demand for iron rails continues the reverse of brisk, and gradually this department shows a falling off. The bar trade is very inactive, and Belgian manufacturers are no doubt seriously injuring us in this department, and of course purchasers will naturally go to the cheapest market to buy. Pigiron is materially unchanged.

There is not so much briskness apparent at the steelworks. At the Landore (Siemens's) Steelworks the portion known as the New

There is not so much briskness apparent at the steelworks. At the Landore (Siemens's) Steelworks the portion known as the New Works is at a standstill; while at the Old Works the men are engaged on the day-to-day system. The result of the notice to terminate contracts, which came into force last month, has been the discharge of about 800 men. It is said, however, that there is a new company in treaty for leasing the large blast-furnaces and coke-ovens near the New Works, and which have been idle for a long time. The tin-plate trade has not much changed. Prices are very far from satisfactory. In the coal industry several large contracts are being worked out, and there appears an indisposition to enter into fresh ones of an extensive nature at the present low prices. There is about the usual activity noticeable in the steam coal trade. Shipments are large, and prices and freight are firmer. Large quantities of coal are now being forwarded to the Mediterranean ports. Prices as yet show no change. There appears to be a little more doing in house coals, and shipments of patent fuel have been looking up a little.

have been looking up a little.

EXPANSION APPARATUS FOR WINDING EN

The propositions to apply automatic expansion apparatus to winding engines have been very numerous, but nothing approaching perfection has yet been devised; an improved arrangement has now been patented by Mr. John LLOYD, of Priors Lee Hall, near Shifnal, according to which a disc is set in motion by a shaft connected with the drum shaft by a worm, screw, bevel gearing, or other arrange-ment, so that the disc shall make one complete revolution while the drum shaft makes the requisite number of revolutions to perform the up or down journey in the pit shaft. On each side of the cir-cumference of the disc a number of cut-off plates are bolted, each having a certain amount of taper. As the disc revolves the cut-off plates are brought in contact with catches which raise a lever con-sected to an equilibrium value placed between the steam raines of nected to an equilibrium valve placed between the steam-valves of the engine cylinder; or, if a slide valve, at the back of same, or in any other convenient position. This valve cuts off steam according to the varying taper on the cut-off plates. One of the catches falls into gear for the up journey, and the other catch for the down journey. Both these catches are bolted together, and so balanced journey. Both these catches are bolted together, and so baranced as to fall into gear automatically according as the disc revolves. A lever works on a fixed pin, and is fitted with two stops, which prevent the catches when reversed by disc, from falling over too far. On the other side of the disc the taper plates are arranged with the

On the other side of the disc the taper plates are arranged with the taper running the contrary way.

The taper in the cut-off plates can be made more or less, so as to cause any desired degree of expansion. Mr. Lloyd arranges a shaft with levers and links connected with a lever worked by hand or foot, so that the engineman at any time may throw it out of gear, or himself regulate the expansion by band independently of the automatic cut-off gear. A balance weight is attached to the lastmentioned lever to equalise friction and the weight of levers and rods. After the automatic cut-off gear has been thrown out, as derods. After the automatic cut-off gear has been thrown out, as described above, it may be again applied during any part of journey, as the shaft on which the disc is fixed always continues to revolve. as the shaft on which the disc is fixed always continues to revolve. The disc is provided with a plain part periphery, on which the catches are caused to act without shifting the expansion valve when the engine first starts. The worm may be upon a shaft arranged to work into a worm wheel upon the disc shaft. It is stated that in operation the invention does all that could be desired.

MACHINERY FOR PUDDLING IRON AND STEEL

MACHINERY FOR PUDDLING IRON AND STEEL.

Some improvements in machinery for puddling iron and steel have been invented by Mr. DAVID HIPKINS, of Tipton. It is applicable to single and to double furnaces, but reference to the latter will suffice. At the middle of the foundation plate a horizontal toothed wheel is situated. This wheel turns on a vertical shaft fixed in the foundation plate. The said wheel has teeth on its under face, by means of which in receives rotary motion from a pinion driven by a steam-engine or other prime mover, and has teeth on its periphery by which it communicates motion to the other parts of the machine. The mechanism for working the two rabbles of the furnaces is situated on opposite sides of this wheel, and are similar to each other atted on opposite sides of this wheel, and are similar to each other. ated on opposite sides of this wheel, and are similar to each other. In a strong socket in the bed plate, near the circumference of the toothed wheel described, a hollow vertical axis works. This axis carries the inclined bracket, from the top of which the rod is suspended, which gives motion to the rabble or puddling tool. A slow oscillating motion is given to this bracket by means of a connecting rod, one end of which is jointed to one side of the base of the bracket, and the other end to a crank pin on the upper side of such restricts. and the other end to a crank pin on the upper side of and near the centre of the toothed wheel. During each rotation of the toothed wheel the bracket is made to perform one oscillation. In the hollow axis carrying the bracket a solid axis works freely. On the summit of the said solid axis is a crank plate, on the under side of which is a pinion which engages with the toothed wheel described. The said crank plate has on its upper side a crank pin which gives motion to a connecting rod suspended from the bracket and giving motion. to a connecting rod suspended from the bracket and giving motion

The action of the machine can be readily understood. Motion being given to the toothed wheel, the said wheel gives motion to the crank plate through its pinion. The connecting rod, connecting the crank pin on the said crank plate with the rod actuating the rabble, gives to the said rod a vibratory motion about its point of suspension at the top of the bracket. A slow oscillating motion is at the same time given to the bracket by means of the connecting rod by which it is connected to the crank pin on the toothed wheel. By the compound motion thus given to the rod working the rabble, the said

rabble is made to perform in the puddling furnace the required raking motion combined with a slow traversing motion. The two mechanisms of the kind described for actuating the two rabbles of the double furnace are situated symmetrically on opposite sides of the toothed wheel, and strain upon the axis of the said toothed wheel is thereby prevented.

UTILISATION OF PEAT.

Reference to the commercial utilisation of peat by the process invented by Mr. John Howard, F.R.G.S., was made in the Mining Journal of June 30, 1877, and it appears that a movement is now being made to commence active operations. A concession has been obtained within three miles of Bridstowe Station on the London and South-Western Railway, between the head waters of the West Okement and the Tavy, whilst the Rattlebrook constitutes its western boundary. Devonshire people scarcely need be informed that peat is generally a spongy mass, formed by the decomposition of plants in moist places. On Dartmoor, in the course of many thousand years, the deposit has attained at some points a depth of 30 feet. Dartmoor peat has the reputation of being very dense in specific gravity, and none, it is said, can excel it in carbonaceous qualities. Scientific men have long been of opinion that for manufacturing and domestic purposes compressed peat is equal, if not superior, to coal domestic purposes compressed peat is equal, if not superior, to coal in many respects. The difficulty has hitherto been to make it a paying commodity, the great obstacle having been the large quantities of air and water found in the peat when dug, which no amount of pressure would remove

The purposes to which peat is applicable are very numerous, and it is stated that that prepared by Mr. Howard is particularly good, and at the same time inexpensive. The mass is cut and thrown into it is stated that that prepared by Mr. Howard is particularly good, and at the same time inexpensive. The mass is cut and thrown into a moveable machine, from which it almost immediately passes out pressed and prepared. It is then cast direct into a frame, which, from its construction, distributes by revolutions powerful air currents, and dries the fuel for packing or storing. So far as domestic purposes are concerned, while peat fuel possesses equal, if not superior, heating and illuminating qualities of the best coal, it has the advantage of being cleanly to the touch. Prepared, it is the same weight and of just the same appearance as coal itself, but the absence of sulphur and smoke, and the prevalence of a peculiar and somewhat agreeable odour, will tend to popularise it, especially amongst those who are tormented with incurably smoky chimneys. There is, however, scarcely any heating medium for which prepared peat is not applicable. Superior iron cun be made from it, and the purity of the steel it aids to manufacture is said to be unquestionable. The results of experiments on peat as a steam fuel are reported to purity of the steel it aids to manufacture is said to be unquestionable. The results of experiments on peat as a steam fuel are reported to have been eminently satisfactory, and its gaseous qualities have been pronounced by Mr. Leon Foucault to be superior to those of coal. The uses of peat do not, however, end here, for it is known as a very valuable agent for agricultural purposes, being undoubtedly a fertiliser of the highest order. As it yields to plants carbon in a pure state, it immediately corrects putrescent matter, and holds moisture till the ground around becomes drier than itself, becoming a filterer when this occurs superabundantly. It is, however, as a fuel that, for the present at any rate, the West of England Compressed Peat Company intend to utilise these excrescences. The bed which, by paying a small royalty, they have obtained the power to work is nearly two miles square, and the deposits are of various depths. The commoners have from time immemorial exercised their rights The commoners have from time immemorial exercised their rights to take the peat, but the quantity they have used has been comparatively of such insignificance that the only impression made has been as of lines having been drawn in all directions. From this it will be seen that the supply of the peat is practically inexhaustible.

COPPER-LINED SMELTING-FURNACE.

A considerable amount of interest is at present being felt in Eastern Nevada in the new Gerrish copper-lined smelting furnace, at present in course of erection at the Eureka Consolidated works. The history of the invention is rather curious. It appears that it was the result of an accident; Mr. Ignacio Campbell, of Silver City, was the result of an accident; Mr. Ignacio Campbell, of Silver City, New Mexico, was running a small adobe furnace at the Great Clifton copper mines, when a hole burnt through just above the tuyeres. He temporarily stopped the hole with a slab of copper lying at hand, and to his surprise it remained firm, although \$500,000 had been expended in experimenting upon fire-proof material without copper suggesting itself. Acting upon the hint, small copper bars were used instead of brick to line up above the tuyeres. These it was found would melt down to about 1 in. in thickness, and then stand for an indefinite length of time. Afterwards plates were cast, 1 in, thick in the form of a square box, which adaptation has proved to thick, in the form of a square box, which adaptation has proved to

be a great success.

Another important novelty in the furnace in question is the air jacket application invented by Mr. G. M. Gerrish, who had adopted the copper-linning system. Upon the first furnace being built it was found that it was almost impossible for the men to work on account of the intense heat thrown out from the thin plates. account of the intense heat thrown out from the thin plates. In removing one of the wind pipes from the tuyeres, Mr. Gerrish held the nozzle on the plates, and found that it cooled them as quick as a cold stream of water. He drew the inference at once that by putting a jacket around the copper, and blowing in the cold air above the tuyeres at the hottest place, it would not only cool the copper, but also save the radiating heat. The furnace is constructed on the same principle as a water-jacket, air being used instead of water. In the former a certain amount of heat is wasted heating the water, but in the Gerrish furnace the air after being heated passes into the furnace to assist the smelting processes. The great passes into the furnace to assist the smelting processes. The great principle of smelting is heat, and anything that saves heat is an economical element in its operation. It was doubted by leading metallurgists whether the copper lining could be used in lead smelting, as it was claimed that both lead and litharge would flux it immediately. This, however, was found to be a mistake. It has stood the test triumphantly, having been used to smelt quartz with litharge. In a few hours effer starting up the copper, plates her litharge. In a few hours after starting up, the copper plates be-came slagged over, and thus acquired surface to protect the plates from any injurious chemical action. The Eureka furnace will smelt 65 tons of mineral in the 24 hours, and by this time it is probably in full operation.

NEW ROTARY STAMP MILL.

An improved rotary stamp has just been patented through the An improved rotary stamp has just been patented through the Mining and Scientific Press patent agency by Mr. Taylon, of San Bernardino, which has several peculiarities. Although rotary in its motion the ore is crushed by stamps, having cams and tappets to operate them, and there is no grinding action about it. Knowing this machine to be one which will interest the mining community, when the proposed of the prop e have prepared an engraving of it, which accompanies this descr tion. The series of stamps are peculiarly constructed, and fitted as to project radially from the perimeter of a drum or wheel, which is mounted upon an axis so as to be rotated by any power. Below is mounted upon an axis so as to be rotated by any power. Below the drum is placed the mortar into which the stamps are allowed to drop. The stamp stems are provided at their inner ends with tappets, which move upon and are supported by a curved cam adjustably fixed to the frame, so that the stamps will be held up until the point is reached where they are required to drop. After the blow has been given, the tappets are received upon a cam-shaped curved incline, and as the drum revolves this incline brings the stamps gradually toward the centre again, so that when they have reached the top the tappet it ready to be transferred to the other incline without jar or noise.

The whole mechanism is easily and cheaply constructed, and is

incline without jar or noise.

The whole mechanism is easily and cheap!y constructed, and is made portable, so that a crushing mill may be set up in any comparatively inaccessible place. By making the stamps of a smaller diameter it causes them to penetrate the material within the mortar, and more thoroughly pulverise it. By the construction employed the blows of the stamps can be delivered with much greater rapidity than on any hattery using straight life; and came, and each blow than on any battery using straight lifts and cams, and each blow will be just as effective. The principal object of Mr. Taylor in getting up this mill is to give to the mining public a cheap mill, and one by which he could get up motion in stamps. It can be run by

steam, water, or hor e-power, and will occupy less smaller buildings, and a series of mills can be attach smaller buildings, and a series of mills can be attached to the same shaft, so as to have as many stamps running as desirable. He claim that he can run these mills with one-half the power required for a straight battery, owing to the fact that the stamp coming up is supported on the incline or cam near the centre of the wheel or drum, and the one going down has its weight as a counterbalance on the periphery of the wheel. The momentum of the wheel also assist the lift, and enables him to strike a heavier blow with 600 lbs. diron than can be struck with 700 lbs. on a straight battery. The discharge is large, being on both sides; consequently he proposes to do more work with eight stamps than a straight battery can with transparent the stamp of this style, will be sold a great deal cheaper than the old style mills. An 8-stamp mill could be increased to 16 if desired at any time by the simple introduction of the stamps, no other mortar, cams, or anything else being required. A full-sized mill will have a wheel about 8 ft. in diameter, and the stamps will weigh about 600 lbs. each. A very rapid motion can be got up on this mill, and it can be run up to 150 drops per minute to each stamp, a medium speed being about 100 drops. Mr. Taylor is an old quartz miner, and one of the stockholders in the Tennessee Mining Company, on the Consumner river, in El Dorado county where the first quartz mill was erected. This was in 1821

is an old quartz miner, and one of the stockholders in the Tennesses Mining Company, on the Concumnes river, in El Dorado county, where the first quartz mill was erected. This was in 1851. He has been connected with the mining interests ever since, and this mill now perfected is the result of his efforts to get up something which would do its work to the satisfaction of the mining public, and do it cheaply. Knowing that stamps did the best work, he has devised this method of operating them so that more frequent blows could be struck and less power be required. In cleaning up the battery there is no need of hanging up the stamps, as by moving the whell to one particular point the stamps will rest on the cams, and no stamp will be on the mortar. The inventor can be addressed care of this office by those desiring further information.

TO MINE AGENTS.

WANTED IMMEDIATELY, a RESIDENT AGENT for a LEAD
MINE in the WEARDALE DISTRICT.
Address, with copies only of testimonials, and stating salary required, to
"Alpha," Mining Journal Office, 26, Fleet street, London, E.C.

WANTED,—A GOLD MINING COMPANY REQUIRES the SERVICES of an UNDER AGENT practically acquainted with the Sinking and Timbering of Shafts, and the working of Alluvial Deposits. A knowledge of Quartz Mining and of the machinery employed in the Reduction of Amironal Company of the Company of the State of Company of Compan

WANTED,—A MINING ENGINEER of many years standing and experience at home and abroad seeks a RE-ENGAGEMENT. and experience at home and abroad seeks a RE-ENGA Speaks several languages. Highest references as to ability, &c. Address, "G. F.," MINING JOURNAL Office, 26, Fleet-street, London

TO COPPER, SILVER, AND OTHER SMELTERS.

WANTED, a SITUATION as SUPERINTENDENT over BLAST
OUPOLAS by an experienced man. He would, if needed, undertake to
uild or instruct to build the same.

Address, W. WILLIAMS, 22, Orchard street, Swansea.

COLLIERY MANAGER.

ANTED, a SITUATION by a CERTIFICATED MINING ENGINEER, aged 34, at home or abroad; latter preferred. Been trained in Coal Mining and Management all his life. Highest references. Address, "A.," MINING JOURNAL Office, 26, Fleet street, London, E.C.

RE-ENGAGEMENT REQUIRED by a MINING CAPTAIN.—
Do not object to go abroad. Twenty years' experience in the management of Tin, Copper, Lead, and Silver Mines in Cornwall, Wales, and Portugal. Good references and testimonials.
Address, "N. E.," Cornish Times Office, Liskeard, Cornwall.

THE ADVERTISER has just secured a VERY VALUABLE SILVER-LEAD SETT, in which there are several rich lodes and thousands of tons of haivans that will pay 100 per cent, over working cost. Wants again-mount of form a company or advance money to open and lay out the works. Its amount will be small.

Particulars from "Miner," MINING JOURNAL Office, 26, Fleet-street, London.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867, AND OF THE BELSTONE MINING COMPANY (LIMITED).

OF THE BELSTONE MINING COMPANY (LIMITED).

A T AN EXTRAORDINARY GENERAL MEETING of the members of the company, duly convened and holden at the Registered Offices of the Company, No. 2, Royal Exchange Buildings, in the City of London, on Wednesday, the 17th day of April, 1873, and at a subsequent Exraordinary General Meeting, also duly convened and holden in like manner at the same plaz, on Thursday, the 2nd day of May, 1878, the following Resolutions were passed and confirmed:—

1.—"That this company be wound up voluntarily."

2.—"That Messrs. James Wilson and Francis Robinson Reeves be appointed liquidators of this company."

FRAS, R. REEVES, Secretary.

Dated this 2nd day of May, 1878

2.—"That Messrs. James Wilson and Francis Robinson Reeves be appointed inquidators of this company."

Dated this 2nd day of May, 1878
Notice is hereby given that ALL PERSONS having CLAIMS against the BELSTONE MINING COMPANY (LIMITED) are required to SEND PABTICULARS of the same to the undersigned, on or before the 31st day of Mayint.

JAMES WILSON.
FRAS. R. REEVES, Liquidator.

2, Royal Exchange Buildings, London, 3rd May, 1878.

WILTON'S MATHEMATICAL INSTRUMENT ESTABLISHMENT, REMOVED from St. Day to A. JEFFERY'S, CAMBORNE

W. H. WILTON begs to thank his friends for their liberal support for so may years, and informs them that (having opened business at Valparaiso) he has now declined business in England in favour solely of Mr. A. JEFFERY, MATHEMATICAL INSTRUMENT MAKER, CAMBORNE, whom he considers (having bean assistant to his father for several years) is in every way capable of creditably maintaining the good name universally awarded to Wilton's instruments.

A. JEFFERY

Respectfully begs to inform Mine Managers, Surveyors, Engineers, &c., the having purchased Mr. Wilton's business, and the very valuable acquisitions and appliances belonging thereto, he has enlarged his Mathematical Instrument Managers, and is prepared to supply Theodolites, Dials, Pocket Dials, Levels, Traversines and Plain Frotractors, Cases of Drawing Institute Menn's, Measuring Chains and Tapes, Assayers' Soales and Weights, Edise Counters, and, in short, every description of Instruments used in Sunti

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THE NOUVEA'U MONDE GOLD MINING COMPANY.—
The SHABEHOLDERS are REQUESTED to PRESENT or to FORWARD the OERTHFIOATES of their SHARE or their SHAREs to the Chief Office, in the OERTHFIOATES of their SHAREs or their SHAREs to the Chief Office, in the OERTHFIOATES of their SHAREs to the Chief Office, in the

May 8, 1878

THE SCOTTISH AUSTRALIAN MINING COMPANY
Notice is hereby given, that the HALF YEARLY GENERAL MEETING of the
abareholders of the Scottish Australian Mining Company (Limited) will be HELD
at the City Terminus Hotel, Cannon-street, London, on MONDAY, the 20th May
at the City Terminus Hotel, Cannon-street, London, on MONDAY, the 20th May
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THE PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY (LIMITED).

Notice is hereby given, that a SPECIAL MEETING of the shareholders in this company will be HELD at No. 14a, Austinfriars, E.C., in the City of London, on MONDAY, the 18th day of May next, at Three o'clock in the afternoon precisely, to take into consideration the position of the company, and to consult with the board as to issuing the remainder of the debentures.

By order, W. J. LAVINGTON, Secretary.

THE CAPE COPPER MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the Terminus Hotel, Cannon-street, in the City of London, on WEDMSEDAY, the 29th day of May instant, at prococlock in the afternoon, to receive the reports and accounts for the year 1877,

Two clock in the atternoon, to receive the reports and accounts for the year 1811, and for general purposes, and for general purposes, and for general purposes. In conformity with the Articles of Association, two directors—viz., John Galsworthy, Esq., and Adolphus Focking, Esq.—retire from office at the above meeting, but being eligible offer themselves for re-election. The general meeting will have to elect an auditor for the current year, and Robert Fietcher, Esq., being eligible, offers himself for re election. Notice is also given, that the Transfer Books will be closed from the 15th to the 28th instant, both days inclusive.

By order of the Board,
6, Queen-street-place, London, 10th May, 1878.

FORTY-FIFTH ANNUAL REPORT OF THE £ 420,000 1,267,500

The Most Honourable the MARQUESS ALEXANDER ROBERTSON, Esq.
OF ALLESBURY.
GEORGE HANBURY FIELD, Esq.
JOHN OLIVER HANSON, Esq.
JOHN OLIVER HANSON, Esq.
JOHN KINGSTON, Esq.
BUNCAN MACDONALD, Esq.
EDWARD ATKINSON, Esq.
WILLIAM HOLT,
ROBERT FERGUSSON,
THOMAS GEORGE ROBINSON,
BISHOPSGATE STREET, corper of Threadneedle-street, LONDON.
CHARLES NORRIS WILDE, Esq.

RICHARD BLANEY WADE, Esq., in the chair.

RICHARD BLANEY WADE, Esq., in the chair.

REPORT.

The directors have pleasure in submitting to the proprietors for their approval the forty-fith annual report of the bank.

The Bank of England rate has varied seven times during the year, the average having been £2 18s, as against £2 12s, 1d. for the year 1876.

The general stagnation in trade alluded to in the last annual report has continued, caused, no doubt, in some measure by the war between Russia and Turkey, and the political uncasiness consequent thereon. Notwithstanding, the continued progress in the business of the bank, together with a slight improvement in the average value of money, enable the directors to recommend—
That the dividend and bonus now to be declared be 11 per cent. for the half-year, being the usual 4 per cent. dividend, with a bonus of 7 per cent., making, with the distribution in January last, 21 per cent. for the year, leaving a balance of £33,995 12s. 5d. of undivided profits to be carried forward to the account of the carrent year.

earrent year. It will be satisfactory to the proprietors to observe that the dividend with bonus, amounting together to 21 per cent., will be paid on the whole of the increased

amounting together to 21 per cent., will be paid on the whole of the increase of depoids has not been so large as usual, the dulness of trade and the less profitable returns from agricultural pursuits having led, as might reasonably have been expected, to an absorption, in many cases, of money that would in ordinary times have remained on deposit.

The following is the summary of the operations for the year, submitted in the form hitherto in use:

Best or andivided profits at 31st December, 1876, as exhibited at the annual meeting in May, 1877, viz.:

Les bonus declared and paid in cash in July, 1877.

£1,248,600 9 8 34,055 2 9 | Dividend on company's stock, paid July, 1877 ... £65,250 0 0 | Ditto ditto J=n, 1878 ... 67,500 0 0 | Ditto ditto J=n, 1878 ... 67,500 0 0 | Ditto ditto ditto ... 97,875 0 0 | Ditto ditto ditto ... 97,875 0 0 | Didivided profits to next year ... 33,905 12 5 -- £ 264,530 12 5

.. £1,018,125 0 0 118,125 0 0

Leaving reserve invested in Government securities £ 900,000 0 0
At the commencement of the present year negociations were concluded with
the Bank of Leeds (Limited) for a transfer of its business, and, thanks to the
cordial support of the directors, proprietors, and customers of that bank, there is
every prospect of the new branch becoming one of great importance. Mr. William
Fergusson, the late manager of the Bank of Leeds (Limited), has been appointed
to the management.

Sproprietors.

Resilved unanimously—That the most honourable 'the Marquess of Aliesbury,
muy Paul, Esq., and Richard Blaney Wade, Esq., be re-elected directors of the y Audi, and, and Monard Braney Wase, and, and, of the proprietors be presented to inctor and an arrangement of the affairs of the company, offeed unanimously—That the best thanks of the proprietors be given to an analmously—That the best thanks of the proprietors be given to an arrangement of the proprietors be given to an arrangement of the proprietors beginning to the proprietors beginning the proprietors beginning to the proprietors beginning to the proprietors be presented to increase the proprietors beginning to the proprietors be presented to increase the proprietors beginning to the proprietors be

rees, red unanimously—That the best thanks of the meeting be presented to the an for his able conduct in the chair.

Extracted from the minutes by

W. HOLT, B. FERGUSSON, T. G. ROBINSON,

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the AMBROSE LAKE TIN AND COPPER MINING COMPANY (LIMITED).—TENDERS will be RECEIVED by the Official Liquidator of the said company, addressed to him at the Stannaries Court Office, in Truro, until the 18th day of May instant, stating the highest price which will be given for all the INTEREST of the company in the set or setts under which its mining operations have been carried on, at the AMBROSE LAKE MINE; in the parish of St. Neot, near Liskeard, within the said Stannaries, and also for the WHOLE of the

near Liskeard, within the said Stannaries, and also for the WHOLE of the PLANT, MACHINERY, MATERIALS, AND EFFECTS,

Belonging to the said company, at and upon the said Mine, and comprising—
ONE 40 in. cylinder PUMPING ENGINE, 10 ft. stroke, one boiler, 10 tons, with economiser; one 8-head iron stamps axie, with heads, lifters, guides, &c.; and a quantity of pitwork, 4, 5, 6, 7, and 9 in: horse whims, and a quantity of other materials and effects in general use in mines.

To inspect the above, apply to the Balliff in chargeat the mine; and for further particulars to the Official Liquidator of the said company, at the Stannaries Court Office, Truro.

(Solicitors for the Official Liquidator.)

Dated Stannaries Court Office, Truro, May 7th, 1878.

MONTGOMERYSHIRE.

VALUABLE LEAD MINE, comprising extensive and masterly lodes, which have already yielded more than £15,000 worth of fine quality ore, commanding a high market price, and which offer acknowledged prospects of very profitable further development. This mine is furnished with powerful WATER WHEELS and all necessary MACHINERY, PLANT, TRAMWAYS, BARRACKS, WORK-SHOPS, together with AGENTS RESIDENCE. The WHOLE to BE SOLD as a complete going concern, by order of the Trustee in Liquidation.

M. F. STATHAM HOBSON WILL SELL. BY AUCTION, at the Mart, on Wednesday, May 22nd, at Two precisely, in One Lot, the VALUABLE

VALUABLE

CWMBYR LEAD AND BLENDE MINE,

In the parish of Machynlleth and Penegoes, Montgomeryshire, only five miles from Machynlleth Railway Station. Held on lease from Bir W. W. Wynne, for the residue of 21 years, at 1-16th royalty.

Particulars of WM. BATTYE, Esq., 16, Great Winchester-street, E.C. (of whom orders to view may be obtained); Messrs. Rooks and Co., Solicitors, 16, Kingstreet, Cheapside; at the Mart; and at the Auction Offices, 20, Coleman-street, Bank.

THE EAGLEBROOK LEAD AND COPPER MINE, CARDIGANSHIRE.

TO BE SOLD, by order of the Trustee, as a going concern, together with the complete and excellent MACHINERY, PUMPING, CRUSHING, and DRAW-ING WHEELS, all the appropriate PLANT, SMITHS and OARPENTERS SHOPS, &c., and a convenient Manager's House. The Mine possesses extensive and valuable lodes, and is susceptible of considerable development. Aberystwith, the port of ship mert, only 14 miles distant.

M. R. F. STATHAM HOBSON WILL SELL, BY AUCTION, at the Mart, on Wednesday, May 22nd, at Two o'clock precisely, in One Lot,

the Mart, on Wednesday, May 22nd, at Two o'clock precisely, in One THE EAGLEBROOK LEAD AND COPPER MINE.

As above, in the township of Caelan and Massmawr, in the parish of Lianfihangel-Genewrglyn, Cardiganshire. Held under leases for the residue of 21 years at 1-14th and 1-16th royalties.

Particulars of Wm. Battyre, Esq., 15, Great Winchester-street, E.C. (of whom orders to view may be obtained); Messrs. Rooks and Co., Solicitors, 16, Kingstreet, Cheapside; at the Mart; and at the Auction Offices, 20, Coleman-street, Bank.

TO BE SOLD, BY PUBLIC AUCTION, under Decree of the Supreme Court of Newfoundland in Equity, in a suit between Charles Fox Bennett, Plaintiff, and Smith McKay and Leander Gill, Defendants, on Monday, the 2nd day of September next, at Twelve o'clock noon (if not previously disposed of by private sale), at the Court House, in St. John's, Newfoundland, that VALUABLE COPPER MINE and MINING PROPERTY called and known as the UNION MINE, Situate on the east and west-sides of Tilt Cove, on the north side of Notre Dame Bay or Green Bay, Newfoundland, and near Cape John, with all ERECTIONS, IMPROVEMENTS, PLANT, and OTHER PROPERTY and EFFECTS thereto appertaining.

IMPROVEMENTS, PLANT, and OTHER PROPERTY and EFFECTS thereto appertaining.

The mine is held under grant in fee from the Government of Newfoundland, containing two miles in length, by half-a mile in breadth; a Licence of Occupation from the said Government, containing one mile square, west of and adjoining the Crown grant and land held under conveyance of fee-simple interests of former owners.

The title-deeds and documents, and plans and surveys of the property may be seen, and further information may be obtained, by application to PRESCOTT EMERSON, Esq., Q.C., Master-in-Chancery, at his office, in St. John's; or to either of the underigned solicitors for the parties, or to either of the underigned solicitors for the parties, or to either of the parties.

Conditions of sale will be published hereafter.

PRESCOTT EMERSON, Q.C., Master in Chancery,
St. John's, Newfoundland, January 28rd, 1878.

For further particulars, apply to C. T. BENNETT, Esq., No. 55, Queen's-square, Bristol; Messies, Henry Bart and Son, Gresham House, London; or to Pirsgent and Greene, Solicitors to the Plaintiff; Winter and Carter, Solicitors for Defendant McKay.

THE CHINA CLAY TRADE.

THE ADVERTISER, who is engaged in the Management of China Clay Works, has exceptional opportunities for the EMPLOYMENT of CAPITAL in this IMPORTANT and PROFITABLE INDUSTRY. Owing to the temporary depression in trade, there are now opportunities for investment which may not occur again for years, and handsome profits are certain. Address, "C. E.," MINING JOURNAL Office, 26, Fleet-street, London.

TO CAPITALISTS.

FOR SALE, A MOST VALUABLE, VERY PRODUCTIVE, WELL SITUATED LEAD MINE in SPAIN. The vein shows abundant quantities of unusually rich ore; testing about 76 per cent.

Near this possession besides are OFFERED FOR SALE or LEASE a few LEAD MINES, with rich veins for developing.

Address, Mr. ALBERT WILCKENS, Carlstrasse, 31, Carlsruhe.

April 16, 1878.

TO CAPITALISTS.

TO CAPITALISTS.

AN EXCELLENT SLATE QUARRY, in NORTH WALES, is OFFERED FOR SALE, which has been PROVED to be of the BEST QUALITY, and its position affords great facilities to work it both economically and remuneratively. There is shoundant supply of water and ampletip room. The vein is about a mile long; average thickness, 80 to 80 yards. Slates may be conveyed either to a main line of railway or a prominent seaport at 2s, per ton. Leasehold 40 years to run. Price 27000.

For further particulars, apply to "E. 16," Brainerd-street, Liverpool.

A MOUNTAIN of SUPERIOR FIRE-CLAY FOR SALE.—
An EXTENSIVE SETT, and quantity proved to be practically inexhaustible. Open quarry working, and no sinking. The clay is of exceptional quality; makes the finest white Dinas silica brick, also a brick equal to Stourbridge; also excellent cement. Contiguous to excellent shipping port and rational statements.

way station.
WILL SELL, the WHOLH or PART, or arrange with a COMPANY for PART
CASH and SHARES. Bona fides only treated with.
Address for further particulars, "Fire Clay," eare of Henry Greenwood, Advertising Agent, Liverpool.

Apply to Mr. T. C. KITTO, 5, Ferris Town, Truro. H.P. PORTABLE STEAM ENGINE, with link motion, reversing gear, ready for delivery; also gear to wind and pump.

A 9-h.p. VERTICAL STEAM ENGINE, with link motion, reversing gear (winding drum if required).

A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with

Apply to— BARROWS AND STEWART, BNGINEERS, BANBURY.

WINDING ENGINES, NEW PRINCIPLE, best and most compact in the market. Several pairs ready.

PORTABLE WINDING AND SINKING ENGINES, the cheapest and most convenient and durable.

STEAM CAPSTANS AND HAULING ENGINES. The greatrst power in the space of any made.

HORIZONTAL, VERTICAL, AND PORTABLE ENGINES. PUNCHING, SHEARING, DRILLING, AND OTHER MACHINES.

MACHINES.

Many of the above secondhand, very cheap. ALEXANDER SMITH, ENGINEER, THE MIDLAND MACHINERY STORES,—Offices: PRIOR STREET, DUDLEY. ROYAL CORNWALL POLYTECHNIC SOCIETY.

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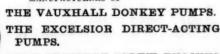
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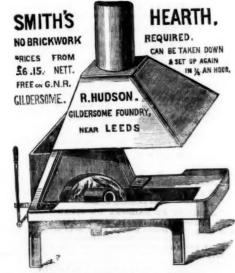
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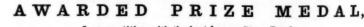
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NON-DIVIDEND FOREIGN MINES.

NON-DIVIDEND FOREIGN MINES.
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40000 Holeombe Vsiley, g,* California 1 0 0 ½ Faily pd. 8000 Hornachos, t, p, in 1 0 0 ½ Faily pd. 13000 Hultafall,* I, bl., Orebro, Sweden 10 0 0 13 12½ 13 Faily pd. 12000 Hunter Consolidated, s-l, Utah 5 0 0 3½ 4 Fully pd. 20000 Imperial Fasailian Collieries, Brazile* 5 0 0 3½ 4 Fully pd. 50000 Jayali, c, Michael Collieries, Brazile* 5 0 0 Fully pd.
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20000 New Zealand Kapangas, Coromandels 5 0 0 Fully pd.
22,181,000 Rio Tinto,* c, Huelva, Spain
14000 Usah, g, s-l, Utah 2000 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Have made calls since last dividend was raid

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUS

Olty of Providence, 5 p.c. coupon bnds 100 102 Exyptian, Gov preference 564, 57 Do., 1 per cent., V.M.L., 70 74 Do., 2 per cent., V.M.L., 70 78 Do., L.Daira Sanish		9 Prices. 9 68 0 55 5 60 0 55 5 7 5 15%
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NON-DIVIDEND MINES.

	NON-DIVIDEND MINES.	
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pd. 1876 1875	10000 Aberystwith * - i, Cardigan 5 00 1 3/2 80 Albion, i, Cornwall 100 0 0 1800 Alvig. & Burng., * i, St. Aust. 3 0 0 1 1/2000 A	*
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6400	Oola Hills * col Timento							
	Oola Hills, * s-l, Limerick Pandora, * l, Carnarvon Park Valley, * s.l, North D.		(0	-	***		
6000	Park Valley, * s.l, North Devon	2		.0				
16923	Payers Mary , North Devon	0	4	0		***	% %	1
12000	Parys Mountain, c, Anglesea Phenix, & W. Phoenix, t, c, Link,		0	0	*.	***	- 1/4	1
4000	Patelon P. W. Phoenix, t. c. Link &			0			36	%
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00000	Port Nigel, * s-l, Carnaryonshire	3	0	0	Ga.	***	48.	Bn.
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	of Chiefock!	2		•	-	***	10 0	0
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					1		3/	1
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	30000 South de Eresby Mountain, 1 10 0 21/4 1% 21/4
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,	20000 Van Consols, l. Lianidloes* 1 0 0 154 134 154 1000 Vaughan*, l., Cardiganahi. 2 10 0 2 10 0
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ſ	6000 West B. Carnaryon
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376	5000 Treleigh Wood, t, Redruth 0 96 36 4 36
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1	A blender of

b, blande; cl, soal; c, copper; g, gold; l, lead; s, silver; sl, slate;
s-t, silver-lead; t, tin; s, xinc.
Limited Liability Companies; † quoted on the Stock Exchange;
I have paid dividends.

IRON AND COAL COMPANIES. Shares. Company. 2100 Abbot, John, and Co. [L.]... 15 Albion Steel and Wice Co. I

36	15 Albion Steel and Wire Co. [L.]	Prin.
	15 Albion Steel and Wire Co. [L.]	··· 13 19
14	100 Ashbury Co. [L.]	85 45
AL.	10 Benhar Coal Co. [L.] 10 0 0.	45 4
4	50 Bilbao Iron Ore Co. [L.] 10 00. 10 Bilson & Orump Meadow Coll. Co. [L.] 10 0 0. 4 Blaen Cwmbach Coal Co. [L.] 10 0 0.	11 34 34 34 3 1 3 1 3 1 3 1 3 1 3 1 3 1
	4 Blaen Cwmbach Coal Co. [L.] 10 0 0.	27 28 di
5	50 Biaenavon Iron and Steel Co. [L.]	
136	50 Bowling Iron Co. [L.]	
	50 Britannia Ironworks [L.]	3 5 Pa
	100 Brown, John, and Co. [L.] 40 0 0	. 11
	5 Cakemore Colliery Co. [L.]	. 13 1- Ch
	100 Cammell and Co. [L.]	0
6	10 Cardiff & Swansea St. Coal Co. [L.]. 10 0 0	
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	5 Chapel House Colliery	1 2
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1	10 Consett from Co. [L.]	26 25 dh.
	1 Consett Spanish Ore [L.] 7 10 0	N 30
	50 Cooke, William, and Co. [L.]	% 1/ Pm.
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	50 Davington Iron Co. [L.]	3 pm,
	100 Fox, Samuel, and Co. [L.]	14
	10 General Mining Ass. [L.] (£1 returned) 9 0 0 20 Great Western Coal Co. [L.]	30 31 44
	Gwyngwillim Colliery Co. [L.] 17 0 0	
	15 Hopkins, Gilkes, and Co. [L.] 200 50 Knowles, Andrew, and Sons [L.] 11 00	=
	10 Liay Hall Coal, Iron, & Firebrick[L.] 17 0 0 1	316 14 db.
	5 Littledean Woodside Coll. Co. [L.] 10 0 0 50 Llynvi, Ogmore, & Tondu Co. [L.] 50 0	1 di
	10 Lydney and Wigpool Iron Ore [L.] 80 0 0 10 Marbella Iron Ore Co. [L.] 8 5 0 10 Margay Steel	0%
	5 Diamond Fuel Co. [L.]	7 die.
1	6 Mold Argoed Colliery Co. [L.]	W -
1	10 Monkiand Iron and Coal Co. [L.]	2% die
	100 Nant-y-Glo and Blaina (8 p. c. pref.) 100 0 0	72 7 dia.
	3 Nerbudda Coal and Iron [L. & Red.] 20 0 0 16 20 New Sharlston Collieries [L.] Pref 30 0 0	1 1% pm
	10 New Sharlston Collieries [L.] Pref 20 0 0 17 10 Newport Abercarn Coal Co. [L.] 10 0 0 17 10 Northmptn. Coal, Iron & Wagon [L.]	16 pm
	10 Northfield Iron Co. [L.] 8 0 0	-/4
	1 Norton Green Coal Co. [L.] 8 0 0 3; 35 Palmer's Shipbuilding and Iron [L.] 1 0 0	8 dia.
1	35 Palmer's Shipbuilding and Iron [L.] 25 0 0 18	14% dia.
1	20 Patent Shaft and Axistres [L.] 14 0 0 20 Pelsall Coal and Lyon tell 10 0 0	Til Do
i	20 Peisall Coal and Iron [1.] 10 0 0 3 50 Phoenix Bessemer Co. [L.] 15 0 0 12	dis. pari
1	50 Rhymney Iron Co. [L.]	-
	10 Sandwell Park Colliery Co. [L.] 10 0 0	18
10		13%
	0 Shotts Iron Co. [L.]	92 pm.
3	10 10 10 10 10 10 10 10	19 dia
80	0 Somorrostro Iron Co. [L.]	14% dis
100	5 South Wales Coal Co. [L.] 50 0 0 21 0 0 6% 8 Staveley Iron and Coal Co. [L.] 60 0 0 6%	714
100		
100 50	Swansea Valley Steam Coll. Co. [L.], 6 0 0	416 pm.
25	Tredegar Iron and Coal Co. [L.] 20 0 0 11 Ditto B. shares 20 0 0 11	9 die
20 10	Ulverston Mining Co. [L.] 25 0 0 21 Vancouver Coal [L.] 12 0 0 5	22
100		3 die, 1½ die.
50 25	Weish Ironworks Co. [L.]	35 pm.
10	West Mostyn Coal [L.] (12 p.c. pref.)	19 die
10	West Swansea Colliery Co. [L.] 500 Whitehaven Iron Co. [L.] 500	
100	Wigan and Whiston Coal Co. [L.]	-
100	Weish Ironworks Co. [L.] 100 0 0 20 Welsh Ironworks Co. [L.] 20 0 0 14 W. Oumberland I. and Steel [L.] 20 0 0 14 West Mostyn Coal [L.] (12 p.c.pref.) 5 0 0 West Swansea Collery Co. [L.] 5 0 0 Whitehaven Iron Co. [L.] 10 0 0 Wigan and Whitehn Coal Co. [L.] 70 0 0 Wigan Coal and Iron Co. [L.] 75 0 0	
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	WAGON COMPANIES.	
10	Birmingham Wagon Co. Ct.	

WAGON COMPA	NIE	t.Q			
10 Birmingham Wagon Co. [L.]	10 10 10 10 5 5 10 20 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	211% par 9 8 5% 6% 92 5% 5	934	pn

TELEGRAPH COMPANIES.

TELEGRAPH COM	DAN	OTTE		
10 Brazilian Submarine	. 100	0 0		611
20 Direct United States Cable	. 10	0 0	634	634
10 Eastern	20	0 0		1834
10 East, Exten Australia and Co.				
10 Great Northern	10			736
25 Indo-European	10		736	8
10 Mediterranean Extension	25	0 0	18%	19%
8 Reuters	10	0 0	214	3
5tk. Submarine	. 8	0 0	936	10%
10 West India and Panama	100	0 0 2	20	230
20 Western and Brazilian	10	0 0	234	216
\$1000 Western Union, 7 per cent. Mort. Bon	20	0 0	436	436
per cont. Mort. Bon	10 81	0001	10	112

1.	MISCELLANEOUS,
8	K. Atlantic and Great Western Towns
-	25 Australian Agricultural
1	25 Austral. Mort. Land and Finance [L.] 5 0 0 51 83
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1	16 Fore Street Warehouse [L.]
1	15 Foster, Porter, and Co. [L.]
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	1 Greenhill [L.] 1 0 0
1	
71	k. Ditto, 6 per cent
Sth	Ditto, Surplus Certificate
1	t. Lehigh Val. Con. Mort., A, 5. p. cent. 100 0 0104 104 0 Milner's Safe [L.] 104 0 0734 856
	Union Pacific Land Grant, 1st Mort. 100 0 0 105 107 Union Pacific Railway, 1st Mort 100 0 0 108 119

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